

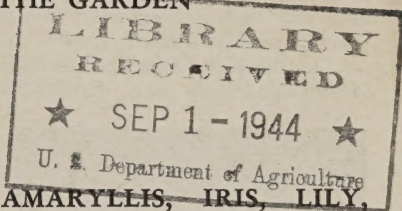
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62,09

BULBS FOR POTS

AND FALL PLANTING IN THE GARDEN



A CATALOG OF BULBS OF THE AMARYLLIS, IRIS, LILY, ORCHID, ARUM, OXALIS AND OTHER PLANT FAMILIES

Special Articles: A Personal Letter to You; How to Grow Amaryllis; How to Grow Bulbs in Pots; Discussions of Soils, Fertilizers, pH of Soils, etc. Culture Directions for All Bulbs.

FALL 1944

CECIL HOUDYSHEL

1412 THIRD ST.

LA VERNE, CALIFORNIA



Miss Newman

Librarian
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VICTORY and the Problems of Peace

Dear Floral Friends:

For the benefit of our new customers, I will explain that I strive to cultivate friendship with all who love flowers. I receive so very many more friendly letters each year than is possible for me to answer, that I write a letter in each catalog. The letter is personal, and to you.

In the eight months intervening since I wrote my last letter, events have brought victory apparently near. In the Pacific, Guam is again ours and we are within striking distance of the Philippines and Japan. In Europe, D day came at last and our Armies are close to Paris. They may be in Paris when you read this.

Probably many of us feel that we should have done more in the way of sending munitions and supplies to China, even if our only means were by air transport. China has the army to use them. China thinks we should have sent more. They have complained and Russia complained bitterly because we delayed so long in invading France. But the long preparation was fully justified by the successful outcome and our rapid advance along the invasion coast.

Our Allies forget apparently that while they are fighting only within their home land, we are fighting all over the world. Our goods and our army required transportation. When we entered the war, we did not have the ships, our factories had to be converted to the production of war materials and very greatly expanded, and worst of all our army and navy were entirely inadequate in size as well as untrained in present day warfare.

We could not deprive our invasion troops of one single gun or round of ammunition, believing that the Army's strategy of knocking out Hitler first, was right. In so doing, we were hastening the day when we could employ our entire strength in helping China.

We shall win the war. Shall we win the Peace? Already our enemies are planning for the next war. To avoid that the average idea at present seems to be to exterminate them. Wholly apart from the revolting and shocking nature of such a plan, very few seem to realize how impossible, mechanically and physically, it would be. Nor do those who hope that we continue to slaughter one moment beyond the time necessary to attain victory, consider the effect on our boys of an orgy of blood. We can well ask with Sheldon, "What would Jesus do?" The war and the battles will leave their scars on our boys anyway. Let them be as light as possible.

Nor will a scourge of this kind promote future peace. We Americans say we have been too easy. All right, admit we have been easy and imposed on. We have also kept out of war, been more peaceful than any other nation on earth, and have prospered the most. Suppose we be a little generous, as President Wilson was in his 14 points.

What about Asia? I believe Imperialism is on its way out. If the white man insists on carrying his "burden" (for the sake of commerce) the Yellow Peril may become real. It would be wiser to encourage the development of Asia than to continue to exploit it. China is now our friend. India could easily be won to friendship for the white man. Which is better for the White Man, friendship and commerce with races



THE HERBERT MEDAL

developing thru our encouragement, or exploitation and hatred for a race that vaunts its superiority? We white men go around over the world, freely admitting our superiority. If we really are, we will keep the idea deeply within our own minds and use the wind power saved for proving by action that we are.

The followers of Hitler proclaimed themselves a superior race. They built up the mightiest army and the greatest force the world had ever seen. What did it get them? The Allied Nations had greater resources in man power, in wealth and greater productive capacity. But China alone has 450,000,000 people. My guess is that the resources of Asia and near by Islands, exceed those at the command of the white man.

But I am not a statesman, a philosopher or even a wise man. But the common people need to do more independent thinking instead of leaving it all to the politicians.

The two **presidential conventions** revealed clearly the politician's attitude in all affairs. One was a seething turmoil of strife, the other put on a great "show." Unfortunately the showman, tho a great and honored statesman, was out of his element. The "stunts" were all too obvious. Their opponents have the greater showman. Acceptance of the nomination from a Marine base was subtle, but second-hand. Not quite as good as when used the first time.

I liked most of the speeches on both sides. The Keynoters were masterly. The Democrats have now learned that the world is run by men in their 60's and 70's, as some of us have long observed, but they had not found it out in 1932 nor later when they "purged" the Supreme Court of its old men. The Republican Convention was the more harmonious and even more inclined to sacrifice their party if necessary because they would rather be right than to elect the president or even to acknowledge the prestige of a former candidate who polled a greater popular vote than his successful opponent. So far as the convention was concerned he was persona non grata.

Let us all vote. It is a privilege and a duty.

This is a hectic life. We have about half enough help. Therefore Mrs. Houdyshel and I work overtime. Decoration Day was our worst time. We cut and I delivered flowers for the Los Angeles market. We kept enough at the ranch for our local sales.

On the night before Decoration Day, the work was all done. I was too tired to sleep well, but finally fell into a nightmarish dream.

I dreamed that Pres. Roosevelt, after all our flowers were picked, announced by radio that he had postponed Decoration Day for one week. So deep were my groans that my wife awakened me. But it helped only briefly because I fell asleep once more and dreamed that he sent his wife to La Verne to take over our bulb business.

Flowers In War Time. Few wholly realize the very special need for flowers at this time. Many, many soldiers request our catalogs because, they say, if they can't have a garden and flowers they would at least like to read about them.

A number of them have ordered bulbs to be sent to mother, wife or others, "because we want her to be happy and not to forget to cultivate a few flowers." Some have ordered, even from the South West Pacific, flowers for loved ones here at home; there have been long letters that I valued highly from boys determined to do their part but longing for peace and the opportunity to grow flowers; a couple who would like to work for me among flowers when it's all over.

The Soldiers aren't forgetting about flowers. Several have come to visit our Rancho de las Flores when in So. California. Mothers are not forgetting flowers. Just yesterday I received a mother's letter. She had three sons in service. She had to have the consolation of flowers in her window this winter, she said.

These acts are a greater promotion for flowers than words of mine could be. Some way, I think that flowers are going to make this world a better place.

Lin Yutang has said: "Our problem is one of moral decay and regeneration. There is more hope in a heather rose than in all the tons of Teutonic philosophy."

Americans, let us make ourselves strong in our bodies, our minds and in our moral and spiritual natures. Recently, we have been trying to burden ourselves with a good many handicaps in our living habits. Is it wise to carry a heavy load while running a race?

The Health Education Society, 530 S. Alexandria, Los Angeles, publishes a book, "The Invisible Friends of the Body," by Dr. James Empringham, which I wish you could all read. Price, paper bound, 50c. Cloth bound, \$1.00.

If you live in the south be sure to have a winter garden of the vegetables that can be grown in winter such as peas, turnips, parsnips, carrots, onions, etc., as well as many flowers. Raise part of your meat (if you are not restricted) such as rabbits, chickens, goats (for milk, cream, butter and meat) or ducks. Remember, food will win the war and it is also necessary to win the peace. Food will be rationed long after the war ends.

May you have success with the Victory garden, the window garden this winter and the spring flowering bulbs.

Yours for Victory, soon
Cecil Houdyshell

TERMS AND INSTRUCTIONS FOR ORDERING

Read the following carefully. It will avoid delay or misunderstanding.

Sales Tax. California customers must add 2½% for state sales tax.

Order Early. Late planting is less favorable but better than not at all.

Remit with order by check or M. O. Currency or coins are acceptable but we are not responsible if lost. Stamps reluctantly accepted at 8% discount. Please do not ask for credit.

C. O. D. We will not ship C. O. D. The fees have recently been doubled. Now a \$1.00 order will cost the customer \$1.34 when delivered C. O. D. Besides extra work for us.

Postage prepaid on orders of \$1.00 or over. Under \$1.00 add 10c extra for handling.

Insurance, 10c extra for orders up to \$5.00. 20c for orders \$5.00 to \$25.00. Under present conditions, parcel post is not as safe as formerly and we can guarantee delivery only on insured parcels. Therefore we advise you to insure.

Express is much safer and is advised for large or valuable shipments especially in very cold weather in north. But it is usually a little more expensive and we ship by express only at your expense. We will add extra bulbs on express shipments.

Prices given are for one bulb unless otherwise stated. A dozen costs ten times the price of one. Six bulbs are sold at the dozen rate. If not otherwise priced, 100 bulbs are sold for the price of 7 doz., or 70 times the cost of one. Not less than 100 are sold at 100 rate. 50 are sold for the price of 4 doz.

Wholesale. Dealers send for our **Wholesale Bulletin**. Use your business stationery or otherwise identify yourself as a bonafide dealer.

Foreign Orders. Postage is prepaid if no greater than to our 8th zone. Best to remit a little extra. If too much we send extra bulbs. We cannot accept foreign orders for bulbs at the 100 rate to be shipped postpaid. We have several times filled orders from Mexico and other foreign countries, for *Gladiolus* bulbs at the 100 rate, only to find the postage required was almost equal to the price received.

Errors. Our packers make a few, not many. We want to correct them. Notify us at **once** in case of shortage or error. **Unpack** your order as soon as received. Don't wait two weeks then tell us the bulbs were mouldy.

Partial Shipments. If all bulbs ordered are not included in the first package received, a colored slip informing you will be enclosed. Do not discard this with packing material. Pay attention and avoid correspondence for both of us.

Substitution. If out of a variety, we usually substitute one as near like it as possible, as good or better and of equal or greater value. If you do not approve this, say, "no substitution."

Guarantee. Our bulbs are true to name, and healthy. We do not, however, accept any responsibility for their performance since we cannot control the conditions of their growth. If, in your opinion, our bulbs are not up to our specifications, please notify

us at once when you receive them. But do not return them until we explain. Customers some times err in judgment and one returned dwarf Baby Callas because they were small. Another returned Ranunculus because they were too dry and dead looking.

Culture directions are not sent with bulbs as all necessary information is given in this catalog.

Catalogs. **Spring Catalog** is mailed Jan. 15. **Fall Catalog** Aug. 15. If no orders are received for two years, names are dropped from our mailing lists. If you are no longer interested in bulbs, permanently or temporarily, please ask your postmaster to return this catalog at our expense.

Correspondence. We enjoy and appreciate the friendly letters we receive. We answer these twice a year in our **Introductory Letter**. I regret that I am unable to write individually to each. On some days in the busy season our first class mail will go over 250 pieces. At this time we must use our too small office force for packing bulbs and my time is almost wholly taken by supervision of ranch and my part of office work. No day's work is shorter than 10 hours and sometimes extends to 16 and even more.

We receive many requests for information about growing bulbs. This catalog is written to furnish that as well as to list the bulbs. Most inquirers show that the writer did not read the catalog as the very information asked for is in it. Many questions are like this, "Why don't my Amaryllis bloom,"—and not a word or hint is given about the growing methods used. Even physicians have asked it. Well Dr., will you send me some medicine, or advice to cure John. He is not doing well.

But if personal help is necessary and you have studied this catalog carefully and followed its instructions, then I will do my best. Make the reply easy by enclosing a self addressed post card or stamped envelope. A "questionnaire" form in which I can pen a few lines would save us time.

Identifying Bulbs. We can usually identify your unknown bulbs. The service is gratis. Sometimes we can do this from the flowers and foliage, tho it is better to include a bulb and to give the case history and all known facts. In some cases we must grow a bulb a year to determine it. Then we inform you. We cannot undertake to identify horticultural varieties of Iris, Gladiolus, etc. Enclose addressed post card for reply.

Time of Delivery. We deliver all bulbs as promptly as possible. Lack of sufficient labor sometimes delays us a little but so far we have been able to deliver every order at the correct planting time or before. Certain bulbs like Gladiolus and Amaryllis are not dug and ready for delivery before late November. Colored Callas are dug in October. These will be delivered after those dates.

When we cannot send all the bulbs in the first shipment, a colored slip in your package will state the shipment is incomplete. Some discard this slip without reading it and notify us we omitted part of order. Then we must look it up and write to explain. You should of course notify us at once in case of unexplained shortage as we want to correct our errors.

GENERAL CULTURE DIRECTIONS

The best bulb soil is a rich sandy loam. Only a few, like Bearded Iris, prefer heavy soil. But nearly all bulbs do well in heavy soil, especially if plenty of humus is added.

All soils require the addition of large amounts of humus. You should compost all weeds, leaves and small branches. If possible, add manure to this and when well rotted and fine turn under and thoroly mix with the soil.

Fertilizers. Animal manures are the best. Use them with compost as explained. Do not use fresh manure except as a light mulch for certain growing plants and experiment on a few first as too much quickly destroys a plant. Do not add fresh manure or commercial fertilizer to soil just before planting bulbs or seeds. It would be as logical to give a day-old baby a tough steak, a piece of apple pie and two cups of coffee. Fertilize only healthy, thrifty plants. What would you think of a doctor who ordered a big meal for a sick man as a means of recovery?

Questions we are asked: May I cut off the tops of Daffodils (or Gladiolus, etc.) after they have flowered? How shall I treat my Amaryllis, Clivia, Calla or other bulbs after flowering? I have even been asked if it is all right to cut off the entire top of a Clivia, which has evergreen foliage, after flowering.

The answers are logically determined by considering the annual cycle of a bulbous plant.

A dormant bulb contains a flower bud and short new leaves. There is stored up food in the form of starches, etc., and also enzymes for digesting this food. While dormant, the stored up starches are turned into soluble sugar. Roots, buds and foliage begin to develop in their natural order and your care is rewarded. When thru flowering, the bulb has become smaller and is soft instead of firm and plump. This is a critical time. The bulb may appear at a pause for a short time but when a good root system has developed it will begin active growth. Encourage that. Give them food and water. Enough, not too much. An Amaryllis will often grow 6 mo. and a Gladiolus 3 or 4 after flowering. The longer you can keep it growing, the larger and better will be your resulting bulb for next year. The yellowing of foliage will signify the bulb has reached full development. If you do not feed and water your plants, pets, domestic animals and children when they are awake and hungry, they do not thrive. If you know how to make a husband happy (or a wife) you should know how to make a plant "happy." Don't "Love 'em and leave 'em," and over-coddling is often as bad as neglect.

Depth and Spacing often cause too much concern. Bulbs usually have sufficient adaptability to do well under widely varying conditions. In a general way, bulbs should be about two or three times their diameter apart. Small bulbs like Ranunculus No. 3 may be covered 1"; bulbs the size of a Daffodil covered 4" to 6". Bulbs with a heavy top need deeper planting to maintain an erect position. Planting in light sandy soils should be deeper than in heavy soils. In very cold climates, deep planting protects bulbs from damage from frost. Few bulbs are too finicky about their depth and many of them have the ability to correctly adjust themselves to the most favorable depth if left in one place a few years.

Alibis. Many amateur growers refuse to accept responsibility for their failures when they result. They blame the bulbs, but not themselves, the weather, their soil or pests. Therefore they do not learn from the best teacher, experience. Luther Burbank said, "A failure is an accomplishment." It is, if you learned by it.

ACID AND ALKALINE SOILS

Most plants thrive in neutral, mildly acid or mildly alkaline soils equally well as they have a wide range of adaptability. But a few require alkaline soils and some will thrive only in distinctly acid soils. In the latter class are included Rhododendrons, Callas and most shade loving plants.

The acid-alkali balance is expressed in pH units. pH 7 is neutral. Below that the acidity increases, above it the alkalinity increases.

Soiltex Outfit. This little testing kit will enable you to determine the pH of your soil. No chemical knowledge is required. Directions for use are included with lists of plants and their preferred pH. Price \$1.00 postpaid.

If soils are too alkaline or if plants to be grown in them require more acidity the best remedy is to incorporate much humus. Peat is most acid usually, though some American peat has become alkaline. Oak leaf mould is more acid than other leaf moulds. Use much leaf mould or peat (preferably imported) for Gladiolus, Callas, Arums, Lilies, Haemanthus, Nerines, Orchids and all plants that require acid soil. It is best to buy peat locally on account of the high cost of transportation. But be sure it is imported Canadian peat with acid reaction. It should be pH 2.5 to 4. Test the peat offered you with Soiltex and don't buy poultry peat.

Canadian Peat. The most acid now obtainable. We can furnish this to local or near by customers who call for it at \$5.50 per bale. 10 lbs. for \$1.00. Or we will ship

by express, f. o. b. for that price. Ask your express agent the cost before ordering as these bales weighed when we received them over 100 lbs.

Rootone. We know of really remarkable results from the use of Rootone, a plant hormone powder that induces quicker rooting of cuttings and bulbs and sprouting of seed. As a result of its action, bulbs make a more vigorous root system quickly and thus the flowers are earlier and larger; the foliage stronger and when dormant the bulbs will be found to be larger and with greater increase in number. We suggest you touch the base of a **bulb** to the powder until covered by a thin film. Or you can apply it with a soft brush or from a salt shaker after bulbs are set. Dip the end of cuttings into the powder. Tumble the seeds in a jar or in the seed envelope with the powder. When the seeds are coated, roll them out and save remaining powder. Treat your victory garden seed. Rootone will treat from 60 to 300 times its weight of seed and thousands of times its weight of bulbs.

We especially advise its use with spring planted Amaryllis bulbs as at this time the roots are likely to be absent or mostly dried up.

Price. One-half ounce is a good supply. Mailed, postpaid for 50c. Use directions above. We can supply in 1 lb. cans (for extensive plantings) at \$5.00, postage 15c extra.

Vitamin B-1 is a useful stimulant for plants, we believe. We have soaked the roots of Amaryllis in flower in the solution, when transplanting and the flower was uninjured, lasted for days and seeds were ripened. We have used it successfully with other plants in transplanting. **Price.** **Bottle** of 100 tablets, 75c.

Directions for use, applying only to our own tablets. In transplanting bulbs or any plants, loose roots, dissolve 5 tablets in 1 gal. water. Soak roots in this 15 to 30 min. Pour solution around plant when set.

To stimulate growing plants, for the first application dissolve 1 tab. in 2 gal. water. For succeeding waterings, use 1 tab. to 4 gal. of water once a week.

Warning. Do not soak dormant bulbs in vit. B-1. It rots them.

Information Please. I am always seeking for more and recommend that you do the same. That is why I belong to **The American Amaryllis Society**, (see under Amaryllidaceae) and **The American Horticultural Society**. The latter society publishes the **American Horticultural Magazine**, four large copies on heavy book paper, per year, which members receive. The topics covered are the entire field, not merely bulbs. The annual dues are \$3.00 per year which you may send to me if you wish.

You should join a local Garden Club, and subscribe for **Flower Grower**, Albany, N. Y. Send direct to them, \$2.00 per year.

Bailey's Cyclopedia of Horticulture. This 3-vol. set of over 3,600 large pages describes almost every cultivated plant. A wealth of culture information is also included. For \$20.00 we will send the complete set, postpaid. Sales tax in Calif. 50c.

BULBS AS POT PLANTS

Bulbs are the most desirable of pot plants and may be easily forced in the living room or kitchen. Their response is much more rapid than that of a recently potted non-bulbous plant because of their storehouse of food and energy in the bulb. The reward is often an outstanding flower in a few weeks.

The proper time to pot will usually be given under the listing. It is very important to pot at once the following: Callicore, Haemanthus coccineus, Amaryllis advena, Lycoris radiata, Sternbergia or others that bloom very early in fall. Pot soon the Arum Palaestinum, Veltheimia, Lachenalis, Cyrtanthus, Nerines and Oxalis. White Callas, Freesias, Baby Glads, Sparaxis, Tritonias, Babians, and those that flower from mid-winter on, may be planted from Oct. 1 to Dec. 15. Colored Callas may be potted as early as Dec. 15 if watered only lightly until well started. They start easiest about Feb. 15 and are less likely to rot from too much water before growth starts. Amaryllis hybrids and most Amaryllis species can be potted from Dec. 1 to Apr. 1 but the early date is preferable.

The Ismene, Elisena, Agapanthus mooreanus minor, A. pendulus, are sent as soon as dormant as all are deciduous. They do not usually start before about Feb. and

should be watered very little until growth starts. Don't water *Ismene* and *Elisena* before Feb. 1 and keep these two in a very warm room, as this will make them start more easily and more sure to flower early. 70° to 80° is not too warm. *Amaryllis*, *Agapanthus*, *Ismene* and *Elisena* like a warm room when growing but most of the others need a cool room.

Clivias are among the most gorgeous of pot plants. I would place only *Amaryllis* and *Orchids* as more desirable. They need a cool room and not too much water in winter. *Cymbidium Orchids* are gorgeous pot plants. They should be potted in $\frac{3}{4}$ peat and $\frac{1}{4}$ sandy loam or nearly pure sand. Half and half will do. Leaf mould may be used instead of peat. Light watering but frequent, they must not become dry nor soggy.

Billbergias make nice pot plants with attractive foliage. Water sparingly in winter unless flowering. *B. nutans* has a lovely flower in Feb.

The following can be moved or potted at any time: *Amarcrinum Howardii*, *Sprekelia formosissima superba*, *Tulbaghia violaceae*, *Clivia*, *Cymbidium*.

Haemanthus Katherinae, one of nature's masterpieces, is a gorgeous pot plant. This bulb is almost evergreen and has only a very short appropriate season for moving and repotting, usually late Jan. to Feb. but not always same date. Use regular potting soil with peat added and a 12" to 15" pot.

I have mentioned only the most outstanding bulbs for potting here. Dutch *Iris*, *Allium neapolitanum* and *triquetrum*, *Brodiaea uniflora* and many other bulbs listed in this catalog are also desirable for potting. For that matter one can grow about anything in a pot of appropriate size but I would not recommend a *Sequoia gigantea*.

Potting Directions

The pot for a 2½" *Amaryllis* bulb should be about 7" diam. This is about right for most bulbs of that size. Give larger or smaller bulbs, pots proportionate in size. Small bulbs like *Freesias*, *Babianas*, *Tritonias*, *Sparaxis*, etc., if about ½" diam. may be planted 1" or 2" apart in pots up to 6" diam. Large sizes of these that are near 1" diam. ought to be 2" to 3" apart.

It is most important that drainage be perfect and the soil of a friable texture that allows water to drain perfectly. Cover the hole in the bottom of pot with reversed bits of broken pots and on top of that small pebbles then coarse sand will help. An imperfectly drained soil often causes bulbs to rot before starting and if they start they do not grow and flower well. Yellow tipped leaves often indicate poor drainage. The pots should be clean and scalded.

The proper soil is a rich sandy loam with the addition of thoroly rotted leaf mould. Add peat or oak-leaf mould for acid loving plants. Use no fresh manure or other fertilizer at planting. Be very discreet even in using very old rotted manure. Rotted dairy manure is rather safe. A heaping tablespoonful of bone meal is good. Thoroly mix all ingredients.

Most small bulbs should be planted just under soil surface.

An *Amaryllis* and most large bulbs may have $\frac{2}{3}$ of bulb above surface. When placed, the soil may be settled by a thoro watering, once. After that no more water is usually needed until after growth begins, altho the soil should not become quite dry at base of bulb. A wet condition very long often rots a dormant bulb before they start, or later. The soil surface may appear dry and yet be too wet for starting bulbs at center of pot.

Most bulbs should have a cool room, about 60° while rooting. When a bud or foliage gives evidence that growth has started, bring the pot to living room temperature, of about 70° and water slightly. It is not time to water them freely yet. Do that only when flowering or in full growth. Do not overwater at any time. Sufficient time between waterings must be given to allow water to drain away, evaporate or be absorbed by roots so that air penetrates and bathes the entire root system. This is very necessary to plants and the roots need not be actually dry to permit it. But they must not be water logged. When in full growth and bloom feed the bulbs about every 2 or 3 weeks with very weak liquid manure. It should be only amber tinted, the color of weak tea.

Proper feeding will result in luxuriant growth. Too much yellows the leaves, because the root hairs are burned off.

It is very important to continue watering and feeding after bulbs are thru flowering. At that time they are rebuilding lost tissues, increasing in size, making offsets and finally constructing new buds for next season. At this time they will also store up food to support the early growth the next year. This is where most amateurs fail in getting results the following year. Some even write and ask me if they should cut off the foliage and dry up the bulbs at once, after flowering. Plants are living beings. They feed, drink, breathe, grow, react to light and heat and die the same as you if not permitted to follow nature's way. If they do not succeed, however, very many blame the bulbs. You will succeed with intelligent care. Blame yourself or the conditions of growth when you have an occasional failure and you will thus learn. There is an element of chance in growing anything, but it is reducible. That makes it interesting. Match your skill against all unfavorable possibilities and learn to overcome them. That is your life problem also. There is a cause for everything. Find it.

ARRANGEMENT OF THIS CATALOG

is by Plant Families, not alphabetically. We also try to group more closely related plants together. Customers approve this plan because of increased information made possible. Only one customer has called for an index. But that is impossible as well as unwise. You need to read all the catalog. Many customers write us that they do; some read it several times. There is information on every page.

In the following lists, the **genus**, (plu. genera) is mentioned first. After it, the **species**, (plu. also species) or horticultural variety is named. Thus we list *Amaryllis ambigua* or *Amaryllis "Sibyl Houdyshel"*, tho it is more botanically correct to say *A. hybrida*, var. *Sibyl Houdyshel*. For the sake of brevity we shorten this. Please note the initial of the genus is used for the second and succeeding species. Thus, the initial *A.* may mean *Amaryllis*, *Alstromeria* or *Agapanthus* according to the species listed just preceding.

THE AMARYLLIS FAMILY—*Amaryllidaceae*

This family includes the bulbs from *Agapanthus* and thru *The Alliae*.

The American Amaryllis Society is an association of those thruout the world who grow Amaryllids as an interesting and intellectual hobby. An annual book "*Herbertia*" of about 250 pages is sent to each member. Therein is discussed the best culture methods; descriptions of new species; notes on *Amaryllis* in their habitat; reports on experiments in crossing, culture, propagation, etc. *Herbertia* is the essential reference book on Amaryllids. Beautifully illustrated.

I invite you to become a member by sending me \$2.50 for your 1944 dues. This will entitle you to a copy of vol. 11, **Herbertia**. The book is almost ready for the printer and it is hoped that it can be printed this fall and sent out before Jan. 1. But no positive date can be given as many publishers are engaged in the production of war necessities and we must be willing to wait in the confidence that we will have **Herbertia** at the earliest possible date.

Many new members are purchasing the former issues of *Herbertia*. Vol's 1 to 5 inclusive are no longer available. Vol's 6 to 10 may still be had for \$3.25 ea. but the supply of some will soon be exhausted. If you are anxious to get a complete set, I will try to get vol's 1-5. But inquire only if very much interested, not simply to satisfy a casual curiosity.

Send us your check for membership and for the *Herbertia* issues desired.

Our *Herbertia* Editor, Dr. Hamilton P. Traub of the U.S. Dept. of Agriculture, now has charge of a Guayule Rubber plantation in California. He is, no doubt, the greatest living authority on all Amaryllids. The Society is fortunate to have his devoted and gratuitous services. But we must accept such services as second to his great work in rubber production.

Notice to All Members

The American Amaryllis Society is now incorporated in California since Dr. Traub has been sent to this state by the Government he serves. Owing to this removal and to the introduction of the zoning system in the handling of mail it is advisable for you to send in your correct address with proper zone number.

HOW TO GROW AMARYLLIDS

The word **Amaryllid** means any plant belonging to the **Amaryllidaceae**. The species **Amaryllis** is one of them. The following discussion pertains to the entire family.

Certain Amaryllids bloom very early in the fall, beginning even before this catalog is issued. We can hold these bulbs back only a short time and then they begin to bloom even in our bulb trays. These are *Brunsvigia*, (formerly *Amaryllis belladonna*), *Amaryllis advena*, all *Lycoris* species, *Haemanthus coccineus* and *Sternbergia lutea*. By all means order these before Sept. 1 if possible. We may be able to keep them from flowering a little longer but no promise is given and if you order too late you will receive a bulb that has already flowered.

These are all hardy in the south where temperatures do not go below about 10° to 15° F. In fact *Lycoris squamigera*, *L. incarnata* and *L. purpurea* are quite hardy in the north. They can all be grown in pots, but *Brunsvigia rosea* and *Lycoris radiata* seldom flower the second or following years and are not recommended for pot growing except to see the first year's flowers,—and they are worth it.

Cyrtanthus must also be ordered very early if you want flowers the first year. They are tender bulbs, suitable for the garden only in the warmer sections of the south. They are of easy culture in pots but recommended only to collectors. Altho lovely, they do not furnish the bright display of many cheaper bulbs. Give full sun exposure.

Other culture notes for Amaryllids will be found with the listing.

Classification of Amaryllidaceae

Since the time of Carl Linnaeus, the father of modern Botany, who first arranged plants according to their sexual relationships, many additions to our knowledge have required revision of his classification. Thus the Amaryllidaceae has been thoroly revised, first by Herbert in 1836 and about 50 years later by Baker. But since Baker's work appeared, many botanists have studied Amaryllids. Much exploration has been done in their various habitats. New species have been found. There is a vast amount of literature on this subject but so far no one has assembled all this into one work.

Dr. H. P. Traub, Editor of *Herbertia*, has undertaken the task and we hope that his book, "Amaryllidaceae," may be completed and offered for sale in this catalog in a couple of years.

For years, we have been preparing you for the changes in nomenclature which will be used in Traub's Amaryllidaceae. For the first time, this catalog will arrange Amaryllids under these new generic names. Thus **Hippeastrums** will be found under the correct former name of the genus, **Amaryllis**. The former *Amaryllis belladonna*,—which evidently never belonged in the Genus *Amaryllis*, will be listed under the name *Brunsvigia rosea*. **Habranthus**, formerly considered a subgenus of *Hippeastrums*, are not moved to the Genus *Amaryllis* but are given generic standing, the genus *Habranthus*.

List of Amaryllids

Agapanthus. The name means Love Flower. Blooms in late spring and summer. Large, most attractive flower umbels on tall, erect stems. Universal favorites in south and easily grown in north in tubs or buckets, wintered in basement. Full sun. Delivery any time, except *Mooreanus minor* and *pendulus*, which are delivered fall to spring.

Agapanthus Africanus, var. **Mooreanus minor**. A dwarf form especially suited to pot culture. Lovely blue umbels on 18" stem. Likes good garden loam, partial shade. Deciduous, but should not be entirely dry over winter. 35c ea. 4 bulbs for 6" pot, \$1.25.

A. longispatus. New species. Flowers resemble *Orientalis* but blooms more profusely and is more graceful. 75c ea. 3 for \$2.00.

A. orientalis (umbellatus). Blue Lily of the Nile. Our variety is an especially fine one with deep blue flowers on a tall stem. Many flowers are produced in spring and thru summer. 50c. Extra large roots, 75c.

A. orientalis, "Sky Blue." Lovely light blue. \$1.00.

A. orientalis, var. albidus. Has pure white flowers. \$1.50.

A. pendulus. Entirely new and distinctly different species of greatest value. Flowers in shades of blue and purple in a great variety. Flowers long, tubular and pendulous when open. The umbel is smaller but most graceful. Like "mooreanus minor" it is deciduous and should be ordered before April 1. \$1.50 ea.

Alstroemeria. Alstroemerias are very showy plants with long slender stems. As a cut flower they last a long time, are very beautiful and are distinctly different from the more common flowers. The individual flowers much resemble a highly colored small orchid. The flowers are in a large umbel on a long stem.

Culture. They should have about 50% shade. The soil should be a rich sandy loam with good drainage and a great deal of humus. This may be had from old rotted screened manure or leaf mould. Plant the cluster of tubers in the south from Sept. to Nov., with the crown 2" under the soil surface. When tops die after flowering withhold water or dig and keep dry. It is better not to disturb them. In the south they start to grow in the fall and will require irrigation before rains come.

They must have an abundance of water at all times when growing and a good drainage. They are hardy as far north as Washington, D. C., and we have them reported hardy in a well protected situation, with winter mulch in New Jersey and Ohio. In the north they can be planted in the spring. Carefully lift in the fall and store in dry peat or sand, and keep very cool. They may also be grown in large pots. Please order early in fall, as it is hard to hold them back in this warm climate.

Alstroemeria aurantiaca lutea. Bright yellow flowers. A strong grower and blooms a long time. Flowers fine for cutting. 20c. Per doz. \$1.75. Per 100, \$12.00.

A. chilensis. Extremely attractive flowers in a wide range of color from nearly white to various pink, red, yellow and orange tones. One of the best and easiest to grow. Assorted colors only. 15c ea. Per doz., \$1.25. Per 100, \$10.00.

A. pulchella. Large clusters of dark red flowers tipped green and brown spots inside. Tall long stems. Early flowering. 15c ea. Per doz., \$1.35.

A. assorted varieties. This lot contains only excellent sorts, strays, lost labels, etc. 6 for 65c. Per doz. \$1.00.

Amarcrinum Howardii. A cross between Crinum moorei and Brunsvigia rosea. A delicate pure pink color. Increases wonderfully fast and blooms in all seasons, even midwinter here. \$1.50 ea.

Amaryllis. Under this genus we are listing all species and hybrids formerly listed under Hippeastrums. Amaryllis is the old-time and popular name. They are probably the most popular of all bulbs for growing in pots and equally valuable for southern gardens. They are hardy thruout the south along the Atlantic coast to N. Carolina and even up into Oklahoma they can be grown outdoors in well drained soil, planted about 4" deep and mulched with straw, leaves or brush over winter. But for that we would recommend that you plant only A. Johnsonii or the cheaper and usually more vigorous hybrids.

How to Grow Amaryllis In Pots. When bulbs are received, pot at once. Have pots and soil ready to receive them. Do not remove or injure any living roots that are attached. Moisten these roots and dip or sprinkle with Rootone. If there are no living roots, moisten base of bulb after cleaning and apply Rootone. Rootone is not essential but it helps the development of new roots.

A bulb under 3" diam. needs a 6" pot. Larger bulbs should have a 7" to 8" pot in proportion to the size.

The best potting soil is a friable loam. To this add an equal volume of a mixture composed of equal parts of sand, well rotted cow manure and rotted leaf mould. Use no peat. Bone meal is recommended, 1 tablespoonful to each pot. Mix all thoroly.

Pot the bulb with neck and upper bulb surface exposed. Water well but after that

keep the soil only slightly moist until growth starts, then gradually increase. When first potted set the bulbs in a cool, light room. The best temperature now is 45° or 50°. Later the pots may be removed to a room of about 60° or 70°. 80° will force more rapid growth and earlier flowers and this is all right when the bulb is well rooted. Buds will usually have shown.

After flowering, the bulbs will then be shrunken and perhaps soft. A period of growth is necessary to fill them out and increase their size. If good growth is made



A. SIBYL HOUDYSHEL



A. SELECT STRAINS

at this important stage the bulb will be much larger than in the preceding year and offsets may be made. It is necessary to keep them growing as long as possible. When the weather is warm outside the pots may be plunged in the garden or the bulbs with entire, unbroken clumps of roots and earth may be removed from pot and reset. Bulbs may be planted in full sun, but slight shade is good where very hot summers prevail. When bulbs are well established give liberal mulchings of dairy manure. Use stable manure carefully. It is good but very strong. If it does not rain every week give a good irrigation. Before heavy frost, remove to house. Allow them a rest of several weeks but do not allow pots to dry out completely. The temperature of 45° checks growth. When you want them to start, bring to 60° and water a little. You can become expert in obtaining flowers every year. In the garden plant *Amaryllis* just under the soil surface.

I am frequently asked why the inquirer's bulbs do not flower. Perhaps they have flowered the first year after their purchase but not thereafter. Some state their bulbs become smaller each year. These results inevitably follow poor culture. If you give them correct culture, plenty of water and liquid manure when growing well after flowering and keep the growth luxuriant for about 6 mo. or more (as long as they will grow) you will have nice fat bulbs, with a bud or buds formed within for the following season.

When leaves naturally begin to yellow it is a signal that they would like to rest awhile. Some bulbs will continue to have green foliage but one should reduce water to give an early winter rest. Well established bulbs can often be brought into flower in

January or even by Christmas. But they should have had a few weeks dormancy preceding that.

How to judge the quality of the flowers of *Amaryllis* hybrids. The perfect flower of the Leopoldi type should be at least 5" to 8" across. The petals should be well rounded and broad, overlapping each other, no twisting of petals and forming a wide open flat flower. The texture should be smooth and firm of good substance. The tube should be short. There should be little or no green in throat but as the species Leopoldi contains considerable green there are few hybrids that do not contain some green.

There should be no dull colors, like brick red. But colors should be bright and of every imaginable tone within the range of this species.

Self colors are desirable to go along with stripes and other variations. But it is difficult to get other than red selfs and these are unusual. A few of our Select Strains are pure red, scarlet, rose or pink selfs. But they are few and not separately labelled. Don't order self colors or any colors except as listed. When you are lucky enough to draw a self color you may congratulate yourself that you received a bargain worth 3 to 10 times its cost.

Pure Whites are very rare. They are very expensive and are difficult to grow. Be satisfied to have White Backgrounds and Ambigua hybrids.

Amaryllis species

Amaryllis advena. Ox-blood Lily. This species blooms late, Aug. to Sept. There are several flowers in an umbel. It likes deep planting, 6" deep or more and it is reported hardy in Michigan in the mild climate near lakes (where peaches are hardy. There are two colors, **Dark Red**, jumbo bulbs, 50c ea. **Light Red or Pink**, 50c.

A. ambigua. This is now believed to be a wild hybrid from Costa Rica and therefore not entitled to specific rank. Sometimes listed as *A. solandriflora* conspicua. The very tall scape has an umbel of 5 to 8 flowers, pure white with lines of pink. Sweet spicy fragrance. Rare. \$3.00. Jumbo bulbs, \$3.75.

A. organense. From S. Brazil. The flowers are bright crimson and red. Rare. We recommend this and the next species to collectors only as the hybrids have far greater beauty. Small bulbs, not blooming size. Only 10 will be sold at \$5.00 ea.

A. psittacina. Flowers red and green with crimson stripes radiating from keel. An unusual flower and chiefly valuable as it blooms for me in the winter. Only 10 very large bulbs offered at \$6.50 ea.

Amaryllis Hybrids

A. Ambigua Hybrids. These are second generation crosses of Ambigua hybrids pollinated by the better whites. They are white with light to medium pink markings. Fragrant. \$1.00 ea. Extra large bulbs, \$1.50 and \$2.00 ea.

A. Hybrids. Select Strains. Leopoldi Type. These are selected from the very best



A. AMBIGUA HYBRIDS

strains. All are seedlings of the nearest perfect parents, hand pollinated. No chance seedlings (such as those sold at 50c or less) are included. They are offered in four color classes. **White Backgrounds**, will range from almost pure white with light markings of pink, rose, etc., to medium markings; **Pink**, in rose, apricot, salmon to orange tones; **Scarlet**, including orange, salmon and copper tones; **Red**, from dark maroon, deep to medium rose, garnet, ruby to crimson.

The classification is based on the parents of these seedlings. When the seedlings first flower, off colors are rogued out. This may not eliminate quite all as some may not be in flower at time when rogued. Thus we have sometimes found pure white in several of the lighter color classes. But you do always get a fine *Amaryllis* that will please you.

Order thus, **Select Strains, White Background; Red; Scarlet**, at 75c ea. 3 for \$2.00. **Pink**, (scarce this year) \$1.00 ea.

Jumbo Bulbs. Of the **Select Strains** that run 3" to 4" diam. They usually produce 3 or more flower scapes and the flowers are larger. **Assorted Colors**, \$2.50 ea. In named colors, \$3.00 ea.

A. Diener's Posthumous Hybrids. These are Diener's latest, grown from his own seed and planted by him. Claims were made for gigantic flowers but we find them little larger than **Select Strains** and not as desirable. They are *Equestre* type and as many umbels will have from 5 to 8 flowers (from large bulbs) it may be that by disbudding, leaving only about two to develop they might attain the 12" to 16" diameter claimed. Assorted colors only. Jumbo bulbs, \$2.50.

A. Johnsonii. The first *Amaryllis* hybrid, now distributed all over the world. Dark red with contrasting broad white band thru center of petals. One of the hardiest, easiest to grow and most rapid in increase. Large, 50c. Jumbo bulbs, 75c.

A. Sibyl Houdyshel. (Burbank origination.) White with narrow pink line on border and flushed deep pink in throat and lower petal. Very fragrant, sturdy grower, rapid multiplier. Jumbo bulbs, \$6.00 ea. No small bulbs sold.

Amaryllis Seed. We are unable to produce enough seed for our own planting. It is far better anyway for you to grow your own seed as that which you buy is often too old. *Amaryllis* seed should be planted shortly after ripening and drying. One year old seed is unlikely to grow in a good percentage.

Plant Breeding is an interesting science and art. Undertaken as a hobby, it has often resulted in fame. It will involve and develop great skill, ideals of beauty, good taste and intelligence. I suggest you start with our **Select Strains**. Get a dozen or more bulbs and cross only those you like the best. Cross pollination is easily accomplished by placing the powdery pollen borne by the six stamens on the stigma in the center. The stigma when ready for pollen will usually be opened into three parts. When the seed pod is ripe it bursts open and may be removed and dried. Plant the seed (soon) in a fine sandy loam containing plenty of humus. Do not use peat. Cover seed about ½". Seedlings may be grown in pots in house or greenhouse where they will continue to grow all year without a dormant interval until they flower; usually this requires 2 to 3 years. In the warm south they can be grown outside under the half shade of lath. But frost usually destroys foliage in winter and cool nights interrupt growth.

Brunsvigia rosea. Synonyms, *Amaryllis belladonna*, *Callicore rosea*. This bulb is familiar in Calif. and many parts of the south as *Amaryllis belladonna*, *Naked Lady Lily*, etc. I hope you can adjust yourself to this new name the botanists have decided on. There is sufficient evidence that the bulb is really a *Brunsvigia* and certainly it is incorrect to call it *Amaryllis*.

These begin to flower often in late July. The variety **Major** is in full flower in Aug. **Minor** follows soon after. The umbels are many flowered and the flowers are of the most exquisite pink and most entrancing fragrance. They are not suitable for pot growing as in pots they flower only the first year. But that flower is well worth the cost of the bulb.

It is hardly where winter temperatures go as low as 10° or 12° above zero. That

limits its culture to the south, and along the coasts to N. Carolina and the state of Washington.

Order the var. "Major" before Sept. 5 if you wish to see the flower this year. Later bulbs are doubtful. The var. "Minor" will likely bloom this fall if ordered before Oct. 1.

Brunsvigia rosea, major. Pure pink, 40c. L. 50c. Jumbo 80c.

B. rosea, minor. Later to flower. Pink with lighter throat. 65c.

B. rosea, var. "Ethel". This, our seedling, is probably not different from some already named variety. This name will be abandoned when we find the correct one. Dark coral rose with white throat. Late blooming. One of most beautiful. \$2.00.

Clivia. Alto easy to grow and to flower by the amateur, they will always be classed with the aristocrats of flowering bulbs, because the flowers easily place them there. They increase so slowly by division that the chief method must be thru the freely produced seeds. But *Clivia* requires at least five years and usually seven, to flower from seeds. This time involves expense. They can never become very cheap.

Clivias have evergreen, strap-like foliage somewhat resembling that of *Hippeastrums*.

The flowers are produced in umbels of 10 to 25, in rich and exquisite tones of orange, in March and April. When not in flower the deep rich green foliage and later the red fruits are most ornamental.

Culture. They are usually grown in pots, even in the south, as more perfect foliage is thus possible, and when in flower one wants them in the house. We grow them in a lath house, lath spaced $\frac{1}{2}$ " apart and in garden under Avocado (evergreen) trees. They must have shade with only a few flecks of sunshine, but plenty of light and air.

Clivias must never be dried off or allowed to lose their foliage. Keep them well supplied with water after flowering, all summer and fall. Liquid fertilizer occasionally helps. When growth ceases in late fall rest them by giving them less water. But keep moist enough to prevent wilting of foliage. At this time they should have a cool room with temperatures from above 32° to not much over 40°. Pots should be 8" for a small plant up to 12" for larger. Drainage must be perfect. Potting soil is described under "General Culture Directions." pH 7 is about right.

Please note. One cannot guarantee *Clivia* to flower the first year after moving tho they usually do. The only sure way to have one that will flower in 1945 is to add 75c to the price of the plant ordered and ask us to send the plant when budded next March. The extra cost of labor to pack, packing material and postage for a budded plant is now about that much. Do not order budded plants of the \$1.00 size "miniata" or the \$2.50 size of "miniata hybrids."

Clivia miniata. Wide open flowers of soft yellow orange. Flower earliest, late Dec. to Mar. 1. Hardest and easiest to grow. Blooming size, \$1.00. Large, \$2.00. The latter is more sure to flower the first year.



**CLIVIA, RECENTLY RECEIVED,
BUDDED PLANT**

C. miniata hybrids. Similar to the species "miniata" in foliage, hardiness, wide open flowers, etc., but there is some variation in color and form of flower. Most of them are in light orange tones. A few are dark and a few have a white throat. Do not express your color preference for any *Clivia* hybrids as we cannot tell the color from the plant. **Special Prices:** Small plants that should bloom in one or two years, \$1.00. Small blooming size, \$2.50. Med. \$3.00. Large, \$3.50.

C. nobilis hybrids. These are the finest and most rare of the hybrids. There probably is no large stock anywhere in America at present. Foliage broad with rounded apex. The large flowers range from light orange to red-orange. Large, \$10.00. In bud, (March delivery) \$12.00.

Cyrtanthus are closely related to *Zephyranthes*. Bulbs and plants are about the same size but the flowers are long and tubular. Their most vigorous growth and flowering is in the winter tho a few flowers are produced thru a large part of the year. They may become semi-dormant in mid-summer when hot but should not be dried off much. They like rich soil and respond to barn-yard fertilizer.

Cyrtanthus angustifolius. Orange red flowers. 50c.

C. lutescens. Bright yellow tubular flowers. 35c.

Elisena longipetala. Rare Peruvian amaryllid. Closely related to *Ismene*, which it resembles in bulb and plant, but the pure white, large flowers are far more graceful and beautiful. Culture like *Ismene*. Easily grown in the north. Plant in spring, dig and store in fall like *Gladiolus*. Plant 4" deep. \$4.00.

Haemanthus. This south African genus of the *Amaryllis* family is rare in cultivation, therefore unusual. They are hardy only in almost frost free climates like So. Calif. and Florida, but are rare pot plants in the north. The soil must be well drained and should be composed of a mixture of loam, leaf mould and peat, with plenty of sand. The entire mixture should feel gritty. When in vigorous growth, the plants can use weak manure water or light, successive mulchings of manure. The two species listed here are very pretty in foliage and flower and quite unusual. In our spring catalogs we list *H. Katherinae* and *H. multiflorus* which are equally rare and unusual and most gorgeous in beauty.

H. puniceus. Smaller, evergreen plant that makes a desirable pot plant of easy culture. Small umbel of scarlet flowers, on a mottled 12" stem, followed by red fruits. Flowers in spring as a pot plant. Delivery any time. \$2.75 ea.

Hemerocallis. **Daylily.** The flowers range in color from dark bronzy red, thru pastel tones of pink to orange and yellow. They are borne on a branching scape well above the foliage.

The Greek name, meaning, "beautiful for a day," refers to an individual flower. But these are so freely produced, thru a long period that "beautiful every day" would be more apt, as a collection of several sorts show masses of flowers thruout the spring, summer and fall and here we often have some winter flowers. The modern sobriquet of "The Perennial Supreme" is well deserved.

Culture. While their beauty is their greatest recommendation, their easy culture and hardiness adds to their desirability. They will succeed where any plant will succeed. I have known abandoned plants here, where we have arid, hot summer, to persist for years. But that must not be their fate. They grow well in full sun. Slight shade is even better. If given constant moisture about their roots, preserving this and coolness of the earth with a good mulch, the plants are ideally situated and respond with generosity. They are hardy even in severe winters in the north. They are fibrous rooted, not bulbs, and must be planted at once when received. Altho they can be moved any time, it is better to ship from late fall to early spring, which we do.

In these war times, when it is difficult to get labor for maintenance of extensive gardens and landscaping, one solution is to plant Daylilies extensively. They are an almost perfect border or landscape plant, never have to be dug and replanted. All that you must do for them is, keep the weeds down and water. They will even choke out most of the weeds. A heavy leafy mulch helps every way.

In Daylilies, the sepals are colored and petal-like and are an essential part of the floral display.

Hemerocallis calypso. Large, fragrant lemon yellow flowers, June to Aug. 3½ ft. tall. 30c. \$2.50 doz.

H. Crown Prince. Similar to Mikado. June to Aug. Special. 20c. \$1.50 doz.

H. Dauntless. Pale cadmium yellow, greenish throat and delicate fulvous red in center of petals. 2½ ft. June-Aug. A standard for high quality. \$1.25.

H. Florham. Still popular old hybrid. Large, golden yellow flowers. May-July. 50c.

H. Geo. Yeld. Very large flower on 4 ft. stem. Blend of buff, apricot, orange and terra-cotta. 75c.

H. Gold Dust. Small early. Empire yellow. 50c.

H. Kwanso. The Double Orange Daylily. Red and orange. 20c. Special, 3 for 50c or 8 for \$1.00. \$1.25 doz.

H. Linda. A lovely Daylily. Petals, ruffled golden yellow flecked with cinnamon, with a rose zone. The sepals are lighter, pure yellow. \$2.00.

H. Margaret Perry. Brilliant orange-scarlet. 4 ft. July-Aug. 35c.

H. Mikado. Orange with mahogany-red zone. A favorite. 3 ft. May-July. 50c.

H. Radiant. Rich orange. 50c.

H. Sibyl. Dark, purple-red petals with lighter sepals. \$4.00.

H. Soudan. Lemon yellow. Broad wavy petals. 3 ft. June-July. 50c.

H. Vesta. Deep orange, with gold sheen. May-July. 50c.

H. Vulcan. Large, darkest maroon red. Rare. \$2.25.

H. Wau-Bun. Large, apricot sprinkled with fulvous red. Top rank. \$1.00.

Hymenocallis, Spider Lilies

Many botanists have included *Ismene* here but the best authorities place it in a separate genus and we are so listing them here. These true Spider Lilies have huge white flowers. Their long narrow petals and long stamens give rise to the popular name. **Culture.** They are hardy only in the south, but in the north they are one of the easiest grown and most desirable of pot plants. A fine companion to *Amaryllis* and culture about the same except that if kept over winter in a warm room and watered the plant is evergreen and will flower earlier.

Hymenocallis sp. Tropical Spider Lily. The huge pure white, spidery flowers are exquisitely fragrant. 50c.

Ismene. Very popular garden bulbs in both north and south. In the north they must be dug and stored like *Gladiolus* over winter. Some fail to get flowers and even lose bulbs because they store in a cold place. The best storage temperature is 70°. Plant 4" to 6" deep.

Ismene calathina. The **Peruvian Daffodil.** Large white flowers, veined green with a daffodil like cup. Fragrant. Jumbo size, 35c. L. 25c.

I. calathina, var. Advance. This is an improved *Ismene*. The flowers are larger and whiter the scape longer. \$1.00 ea.

I. festalis. A hybrid with *Elisena*. Much more graceful and is pure white. \$2.50.

I. festalis Triumph. A larger, "improved" *Festalis*. \$2.50.

I. Olympia. The largest *Ismene*. The creamy to light yellow flower indicates it may be a cross with *Sulphur Queen*. \$3.00.

I. Sulphur Queen. A hybrid with *I. amancaes*. Sulphur yellow. \$1.50. Rare in America but now offered at this low price.

I. Macleana. Listed previously as *Ismene calathina minor*, an error. It is the smallest flowered *Ismene* I have seen. The small flowers are distinctly *Ismene* in appearance, borne on a taller scape than *Calathina*. Rare in cultivation. 75c.

Leucojum aestivum. Hardy in north. Blooms often before snow is gone. Dainty white flowers, each petal with a vivid green dot. Plant 4" to 6" deep. Do well in full sun, a little better in half shade. 10c ea. 60c doz.

L. sp. unknown. Larger and finer. 25c. \$2.00 per doz.

Lycoris squamigera. **Amaryllis Halli.** The umbel resembles that of *Brunsvigia rosea* but with lilac pink flowers. Blooms in the fall when well established. Plant about 4" deep in good loamy soil containing leaf mould. Part shade is very good though ours are in full sun. Leaves have a short season of growth in the spring. This species as well as the following are fully hardy in the north. Price \$1.00 ea.

L. purpurea. This one is a shy bloomer here and probably must become well established before flowering. We have never seen the flowers. Culture like *Squamigera* and it is also hardy in the north. \$2.50 ea.

Narcissus and Daffodils

Both belong to the genus *Narcissus* of the *Amaryllidaceae*. Their popularity needs no promotion as no garden is considered complete without them.

Culture. All Daffodils except the *Polyanthus Narcissus* are hardy both in the mild climate of the south as well as in the colder northern states. In the north especially it is best to plant the bulbs rather deep where the frost does not reach. Six inches is about right. Smaller bulbs like Jonquils may go more shallow and be mulched. In California too and all the south there is an advantage in deep planting. We plant the Trumpets at least 4" deep. Plant September to November. *Poeticus* very early. All do well in pots.

Sandy loam is the best soil, but any good rich garden soil will do. The addition of thoroly decayed manure is a help. Use no fresh manure. The addition of lime to the soil is good, and necessary if leaf mould is used, as they need a mildly alkaline or neutral soil. Lime is advisable only in sandy soils.

In pots. Most *Narcissi* force easily. Pot the bulbs early for earlier flowers, Sept. to Oct. The soil should be $\frac{2}{3}$ sandy loam, $\frac{1}{3}$ leaf mould and perfectly decayed stable manure, (use both or either one). Water the pots well. The *Polyanthus* varieties like Paper White, Chinese Lily and *Soiliel d'Or*, may be then placed in a cool room and receive sufficient water to start growth. But the Trumpet Daffodils and all other hardy *Narcissus* need a more prolonged period under quite cool conditions to promote root growth. A good way is to plunge the pots in a cold frame or pit outside in the shade, after the first watering, and cover pots with 6" of sand, surrounding the sides well. Thus they will be cool and roots will develop. The sand will prevent evaporation.

As soon as they are well rooted they can be brought inside. Examine the pots first in about 6 weeks. The roots should penetrate the soil to the sides of the pot. By reversing pots held in both hands and tapping edge of pot one can with care lift the pot up to see if roots have reached the proper stage. (This takes about 4 hands.) There is no use to try to force the bulbs before abundant root development is reached. Only failure results.

The room temperature for forcing can be about 55° or 60° at night. Not much warmer during day. A little more warmth during day will hasten the flowers but it may also cause them to blast if too warm. Better keep them cool until buds show. Then not over 70°. Set pots in a sunny window.

Trumpet Daffodils

These are the large trumpet Daffodils. This year we have added several of the newer and later sorts.

Alasnam. Wide, short, densely frilled trumpet of pure deep yellow, a shade deeper than perianth. Very early. 35c ea. \$3.00 per doz.

Beersheba. A magnificent new white Daffodil. Very large flowers, nearly 5" across. \$2.50 ea.

Dawson City. A fine garden and exhibition variety. A broad flat perianth with beautiful flanged trumpet. Golden yellow self. 40c ea.

Diotima. Considered by experts the best of the super-giants. Flower 6" wide on 2 ft. stems. Beautifully proportioned. Perianth deep primrose yellow, trumpet deeper yellow. 60c ea.

Hector Treub. Uniform deep golden yellow. An improved King Alfred. Very early and easy in pots. 35c ea.

Hendrik Ibsen. A real "golden daffodil." Pure self color and of most graceful conformation. Free flowering and very early. 35c ea.

King Alfred. Pure deep golden yellow. Beautifully frilled trumpet. The standard for florists' flowers and home gardens. You can and should plant it in quantity. Round bulbs 15c and 20c ea. Per doz., \$1.35 and \$1.75. Per 100, \$7.25 and \$8.75 f. o. b. (Express, not prepaid.)

Mrs. E. H. Krelage. The trumpet is at first a pale yellow but quickly changes to ivory white like the perianth. Beautiful form. 35c.

Mrs. R. O. Backhouse. The best of the famous pink daffodils. Perianth ivory white. Long slim trumpet of apricot pink, with shell pink, frilled edge. \$2.25 ea.

Polyanthus Narcissus

Flowers in clusters. Hardy only in south and middle south but very desirable for pots in the north. Pot very early and place directly in a sunny window.

Soliel d'Or. Deep golden yellow and very bright and lovely winter flowers. 12c ea. 90c doz.

Paper White. Pure snow white. Very early and usually in flower in early Dec. 12c ea. 90c doz.

Poetaz Hybrids

Improved Polyanthus Narcissus, being crossed with Poets Narcissus. Fine in pots and more hardy than Polyanthus.

Aspasia. Pure white, yellow cup. Very large flowers. 10c ea. \$1.00 doz.

Nerine. This genus is seldom seen in America, altho it is one of the most beautiful and varied of the Amaryllids. Formerly *Lycoris radiata*, Red Spider Lily, was mistaken here for *Nerine sarniensis* and the error persisted for probably 40 years or longer. The influence of this error may still disguise the true *Nerines*.

They are all fall or early winter bloomers. They can be grown in the south in gardens and are among the most desirable of bulbs for pot culture in the north. The soil should be slightly acid and it is usually necessary to add leaf mould and peat to a sandy loam both for pots and garden.

Many growers in Calif., both amateur and commercial, find difficulty in growing *Nerines* and often lose valuable bulbs. The trouble is too much alkali. The remedy is simple and sure. Give 50% peat to the soil and make sure they are well drained. Don't try to grow them where the water level is only a few feet under soil surface if soil is alkaline. But a raised bed might help. A few sorts are evergreen as indicated in descriptions. These need water the entire year. Others not indicated as "evergreen" rest usually thru the summer and in that period water should be entirely withheld.

Plant at a depth in proportion to size of bulb and with top of bulb at least an inch under surface. Give full sun exposure. When foliage of potted bulbs dies turn pots over on the sides until about Sept. 1. But don't forget that the bulb must have as long a period of growth after flowering as possible. Liquid manure will help to achieve a vigorous growth.

Nerine Bowdenii. About 10 or more large rose pink flowers in an umbel 9" across on a 15" - 18" stem or scape. One of the most choice and very easy to grow. This species is an exception in the culture requirements of *Nerines*. As it is almost evergreen it can be kept growing all summer. They may be dried off a little after flowering but need no long dormant period. Dry bulbs ready in Jan. \$1.00 and \$1.50 ea. In Nov. - Dec. we can send selected bulbs with a bud showing for \$2.00 ea. These require extra care in wrapping, more expense, hence cost more.

N. Bowdenii, var. Pink Beauty. Larger and finer than *Bowdenii*, in fact the best of all *Nerines*. It grows luxuriously and increases rapidly. \$5.00 ea. Budded bulbs about Dec., \$6.00 ea.

N. filifolia. A lovely little *Nerine* with evergreen, grass like foliage. The carmine pink flowers on a 12" stem are fine for cutting. Plant a dozen bulbs in a 5" pot as they flower better when crowded. Bloom in Sept. Not because they are of little value

but on account of their very rapid increase we are glad to be able to offer these at a very low special price. 15c ea. 6 bulbs for 45c. 75c per doz. 100 bulbs for \$5.00.

N. filifolia. Deep pink variety. This sort has much deeper colored flowers, larger and on a longer scape. It also flowers later. In every way it is more lovely and desirable. Very rare. Only a few are at present available. As it multiplies very rapidly you will soon have a large clump. \$1.00 ea.

N. fothergilli hybrids. These are exquisite Nerines and quite well adapted to pot culture. The colors range from deep red to various shades of pink, every flower being a masterpiece. \$1.50 and \$2.00 ea.

N. massonorum. The earliest of our Nerines to flower, sometimes in mid-July. Evergreen with grassy foliage like *N. filifolia*. The flowers also resemble it, but are smaller and on a shorter scape. Rare but a good multiplier. \$1.00 ea.

N. rosea-crispa. Hybrid of *Filifolia* but has larger flowers on taller spikes. The leaves are wider and the plant can be either dried off thru summer or kept growing. 50c.

N. undulata. Rose pink. Petals with crisped edges. \$2.00.

The species *Undulata*, *Erubescens* and *Massonorum* are of interest mostly to collectors. For decorative value choose the others.

Pancratium maritimum. Very fragrant pure white flowers in shape like an *Ismene*. Bloom late summer to fall. **Culture.** Plant 4" deep in a sandy soil. Tender tropical bulbs. 20c. Largest, 25c.



**SPREKELIA FORMOSISSIMA
SUPERBA**

Sprekelia formosissima superba. We found this variety (described and named by Hayward in 1938 *Herbertia*) in an old California Garden. The flowers are about twice as large as the common type, a lighter and more pleasing red color. The foliage is evergreen and the flowers are so freely produced thruout the year that it almost deserves the title of an ever-bloomer. We call this the *Orchid Amaryllis* because of the orchid-like shape. Jumbo bulbs, 75c. M., 50c. S., 35c.

Sternbergia lutea. A small yellow flowering, winter growing *Amaryllid*, often called "Fall Crocus." **Culture** like others of this type. Plant 3" deep. They are only a little short of winter hardy in the north and should succeed in protected situations in warmer sections of the middle-south as far north as Philadelphia. They must be ordered before Sept. 10 as on that date we expect to plant all on hand. Extra large Jumbo bulbs 50c ea.

Tulbaghia violacea. A close relative of *Agapanthus*, but small enough to plant 3 in a 5" pot. Flowers are mauve to Chinese violet in an umbel on 24" stems. Begins soon after planting and blooms almost continuously thru the year—winter and summer. Foliage has garlic odor when bruised. 35c. 3 for \$1.00.

The Alliac. This group is now placed in the *Amaryllis* family. Sandy loam is preferred. Do not add too much leaf mould and no peat as very acid soil is not so good. Plant about 2½" deep. The species *Allium* are onions and should be grown in full sun unless noted.

Allium flavum, var. pulchellum. One of the prettiest and most unusual of the ornamental onions. The 15" scapes carry an umbel of the loveliest lavender flowers. I have counted 135 flowers and buds in one umbel with more coming on. As these develop in succession thru a period of several weeks, with no disfiguring dry flowers

to mar their beauty, their display is greatly extended. Should be planted in spring in cold climates, in fall in the south. 35c ea.

A. Neapolitanum grandiflorum. Many flowered umbel of pure white, dainty flowers on a tall stiff scape. Very pretty and easy. Plant 3 to 5 in a 5" or 6" pot 1" deep in early fall. Full sun. Fine in southern gardens. 3 for 25c. \$1.00 doz.

A. Neapolitanum, type. This is the unimproved wild plant. Late flowering but continues a long time. Interesting to plant collectors. 10c. \$1.00 doz.

A. sativum. Burbank's Elephant Garlic. This is the largest, juiciest and sweetest garlic and the easiest to peel. It often makes solid bulbs about 2" in diam. Others divide into very large cloves. Clusters of bulblets form at the base like *Gladiolus*. The flowers and plants are ornamental in the herb garden or border and give a delicious flavor to salads, etc. 15c. 75c per lb.

A. Schoenoprasum. True Chives. Lovely little plants with lavender flowers, used for edgings in the flower or herb garden and add zest to salads, stews. 10c, 4 for 25c.

A. senescens. Erect strap shaped leaves. Deep lilac flowers in a dense globular umbel. Very fine bloomer. 20c ea. 3 for 50c.

A. tuberosum, Oriental Garlic. A pretty *Allium* with white flowers. An ornament in the garden, indispensable in the herb garden. Leaves give a most delicious flavor to salads without the long-lasting high-powered after effect of garlic. In north, winter the plants in pots. They would probably grow in pots in the window all winter. Plants 25c each.

A. triquetrum. Much the finest white flowering allium, we think. The many large flowers in a large umbel are rather drooping. It does well in full sun like most alliums but even better in partial shade. 10c. 3 for 25c.

Brodiaea uniflora. Lovely porcelain blue flowers on a low plant. Usually grown in pots in the north but they are hardy in Ohio. **Culture,** like freesias. 3 for 20c. 45c per doz.

Leucocoryne ixoides odorata. Glory of the Sun. New. Large, fragrant and very beautiful flowers in the early spring. Flowers are prized by florists and expensive. Hardy in south only. **Culture,** like freesias. 5 may be planted in a 5" pot. 10c ea. 90c doz. Per 100, \$7.00.



TULBAGHIA VIOLACEA

Bulbs for Christmas Presents

Bulbs are a solution to your Christmas shopping problem. Do you remember the difficulties of last year? The crowds, the insufficient stocks, the makeshift products, plastics that should have been steel, etc.?

Probably at least 50% of the presents bought are not what the recipient would have liked. But most people like bulbs for their house and garden.

Our bulbs are all pre-war workmanship, perfect in design and material. Prices are not inflationary.

You do not have to stand in line or struggle with a crowd to get waited on. You

sit down in a comfortable chair in your own home, make out your list and enclose your check. The postman delivers them. Simple and easy.

Why not order a dozen *Amaryllis* bulbs, Select Strains, one bulb for each of a dozen friends? Thus they cost you 66 $\frac{2}{3}$ c ea. Potted they will be worth \$1.50 ea. Or give the dry bulbs.

Even the cheap *Oxalis* make wonderful little presents, especially if you pot them and get them started.

For birthday, Christmas or any day you wish to remember your friends with a present, nothing is more suitable than a bulb or bulbs.

IRIS FAMILY—Iridaceae

The *Iris* is the type genus of this family, which includes *Iris*, *Gladiolus*, *Watsonias*, *Freesias*, *Sparaxis*, *Tritonias*, *Babianias*, *Moraeas*, etc., as listed on following pages.

Tall Bearded Iris. We offer more than 100 fine modern *Iris* at reasonable prices in a special price list. Send for *Iris Price List* if interested.

Dutch Iris. These are bulbous *Iris*. The flowers are not fragile like Bearded *Iris* and they are therefore very useful for cutting.

Culture. They should be planted in the fall before Sept. 15 as the bulbs often deteriorate after that date. Later plantings may succeed if bulbs are good and not infested with plant lice. Plant 1 to 3" apart and 3 to 4" deep depending on size of bulbs. They are hardy in milder sections of north but a mulch is advisable. Full sun or slight shade.

Yellow Queen. Tall, deep golden yellow. 3 for 20c. 65c doz. \$5.00 per 100.

Imperator. Tall, deep blue. 10c ea. 75c doz.

Assorted varieties. This mixture contains many varieties besides above. 6c ea. 50c doz. \$4.00 per 100.

Gladiolus

Culture. Glads planted Nov. 15 to Mar. 1 in Southern California and thruout the south (a little later in Northern California and early as possible in spring in the east) are reasonably sure to escape the attack of thrips. Our Glad bulbs are especially grown for this purpose, matured early and dug in August. But if you plant recently dug bulbs you will gain nothing; they will continue their rest of three months before starting.

Thrips are very small insects that suck the juices from the plant. They cause the flowers to wither or appear burned, and appear only after weather becomes warm.

To avoid the damage they do, three measures are effective: Plant early; plant clean, treated bulbs; keep them always moist by overhead sprinkling. *Gladiolus* that are sprinkled one-half hour every evening will seldom show thrips damage at any time of year.

Treating bulbs. Mix 4 teaspoonsful of Lysol in one gallon of water. Soak the bulbs 6 hours in this solution. It may be used several times but not after standing over one week. This is an acid solution and encourages root growth instead of delaying it. Do not treat bulbs bought from us. We treat before selling. We do not advise use of mercurial solutions as they injure the bulbs and delay root formation.

Mosaic Disease. A few varieties, including *Picardy* and *Betty Nuthall*, have recently shown a tendency to become infected with mosaic. It does not hurt the bulb or plant but the flowers become mottled, which greatly detracts from their beauty. There is no cure but one can partly at least prevent its spread by pulling up such plants. It is spread among plants by biting insects, possibly even by thrips, or in cutting flowers. If one cuts from a diseased plant, then from a healthy one, it is likely that one has carried the virus which causes the disease to the healthy plant.

Plant 4" deep; small 3"; bulblets 2". Twice their diameter apart. We plant two rows, staggered in a 4" wide furrow or closer in a single row. Rows about 20" apart. Alkaline soils produce poor Glads. Soil should be neutral to mildly acid. Leaf mould or peat added is useful. Peat causes soil to dry out more rapidly and imported peat

is hard to get. Domestic peat is often harmful because alkaline. Use no fresh manure, but well rotted manure is fine. Top mulch of leaf mould or imported peat is fine.

Keep Glads growing with plenty of water and best culture for at least two months after flowering. Longer is better for this is the period when new bulbs for next season are developing. It is best to dig bulbs in the south, and necessary in the north.

Fertilizers. Use only Superphosphate, a small handful to 6' of row, in furrows on both sides, after plants are about 1' high. Apply about once a month. Try a short space first. If it burns, use less. Some use Ammo-Phos with success but if much is used there is danger of ruining the bulbs. When we fertilize, we usually decide we have done more damage than good. Vigoro is being used successfully.

Soil pH for glads should be 7 or lower as they prefer mildly acid soil and in strongly alkaline soils one cannot grow good glads. The best preparation of the soil is to turn under largest possible quantities of well decayed leaf mould and humus.

Sizes and Prices. We are able to list only large bulbs, 1¼" diam. and up. These are mixed Nos. 1 and 2, except in the **Mixed** we include Nos. 1, 2 and 3, or 1" diam. up. Glads are too scarce to offer any bulblets or small sizes. Please do not inquire for them. If you want 100 or more of a kind, the 100 rate is found by multiplying the price of one bulb by 70. Not less than 100 sold at 100 rate. These will not be prepaid to foreign countries at the 100 rate but will be prepaid at dozen rate.

Gladiolus Supply is still only about 25% of the supply in 1942. Some commercial growers had to abandon their fields for lack of labor. One of the largest growers in Calif. had his field taken over by the army without even a chance to dig his bulbs. We are trying to avoid increases in prices as far as possible and still offer choice varieties and good bulbs. This fall we list still more of the newer varieties.

Albatros. Very large, pure white. Tall. 7c ea. 70c doz.

Allemania. Immense rosolane purple flowers on extra tall spike. Gorgeous. L. 10c ea. Doz. \$1.00.

Annie Laurie. Beautifully ruffled rose pink. L. 6c. 50c doz.

Ave Maria. Early, tall large blue. L. 6c. 60c doz.

Betty Nuthall. Popular orange pink. L. 6c. 60c doz.

Bill Souden. Very large, rich deep red. L. 6c. 60c doz.

Capeheart. New. Light salmon rose. Flowers 6" wide, 8 open at one time. Exhibition quality. L. 20c ea. \$1.75 doz.

Chas. Dickens. Tall, fine radiant purple. L. 8c ea. 75c doz.

Dr. Bennett. Flame red. L. 6c ea. 60c doz.

Dr. Moody. Large lavender pink. L. 6c ea. 60c doz.

Ethel Cave Cole. New. Exhibition quality. Fine large flowered pink, many open. Tall spike. 20c ea. \$2.00 doz.

Gate of Heaven. Ruffled, deep yellow. 6c ea. 50c doz.

Golden Dream. Large deep yellow. 6c ea. 60c doz.

Grand Master. Rich dark red. New. 15c ea. \$1.50 doz.

La Paloma. Vivid, bitter-sweet orange. Very early. 5c ea. 50c doz.

Libelle. Heliotrope blue. The finest color. 5c ea. 50c doz.

Los Angeles. A lovely pink, tinted orange. Good winter grower, making unusual number of flowers per bulb. 5c ea. 50c doz.

Margaret Beaton. New. Pure white with red throat. Tall, fine. 12c ea. \$1.20 doz.

Margaret Fulton. Coral pink to rose doree. 6c ea. 60c doz.

Marmora. Large, tall smoky lavender. 5c ea. 50c doz.

Mary Elizabeth. Ruffled cream, deeper tinted throat. 6c ea. 60c doz.

Minuet. Lavender pink. 6c ea. 55c doz.

Pelegrina. Deep violet blue. Very early. 6c ea. 60c doz.

Picardy. Tall, extra large flower of shrimp pink. The favorite pink. 7c ea. 65c doz.

Radiant Orange. True orange. One of best. 5c ea. 50c doz.

Red Lory. Scarlet red, rhodamine purple throat. 6c ea. 60c doz.
Rima. New. Light lilac pink. 15c ea. \$1.50 doz.
Schubert. Apricot, with scarlet throat. 6c ea. 60c doz.
Sensation. New. Huge deep pink. 20c ea. \$2.00 doz.
Shirley Temple. Large ruffled cream. 10c ea. \$1.00 doz.
Souvenir. Pure deep yellow. Very graceful. 5c ea. 50c doz.
The Orchid. Individual flowers look like a Cattleya orchid, therefore useful in corsages. Lovely also in spikes. 6c ea. 60c doz. (Does not make very large bulbs.)
Wasaga. Apricot pink. 5c ea. 50c doz.
Wurtembergia. Scarlet with cream throat. 7c ea. 70c doz.
Mixed. These are accidental mixtures, lost labels, surplus lots, etc., but not a balanced "hand made" mixture of all. Bulbs are 1" to 1½" or more. 50c doz. \$3.00 per 100.

Baby Gladiolus

Culture much like large Glads. Being smaller they can be planted closer and not so deep. They need an acid soil and therefore much leaf mould or a small amount of peat in the soil helps much. They are winter growers and cannot be grown in the north except in greenhouses or in the window garden in pots, where they do well. Give full sun and a cool room.

Baby Glads are very scarce and wholesale prices are so high we list only our favorite variety. We can offer it reasonably.

California Peach Blossom. A lovely peach blossom pink. Excellent grower and very large in size. We offer only top size, jumbo bulbs, 10c ea., \$1.00 per doz.

Watsonia

Close relative of the Gladiolus but winter growing and earlier in bloom. They grow as tall or taller. The flowers are smaller but in very lovely spikes useful for cutting. The colors are varied in most pleasing tones and bloom early if planted early. Better even the second and third years. Easy to have them for Decoration Day or before in Southern California. In most cases we have discarded names and substituted the name of their color.

Culture. About the same as Glads. In the south they must be planted in early fall (Sept. best) as the bulbs sprout early. Hardy at Washington, D. C., and probably in all climates where temperatures do not go below zero, if planted in a well protected place, 5" or 6" deep and well mulched.

Burbank's Lavender. Large lilac flowers. 8c ea. 75c doz. Per 100, \$6.00.

Ed Sturtevant. Grenadine or light orange scarlet. 8c ea. 75c doz.

Liseran Purple. "Orchid." 8c ea. 75c doz.

Rosolane Purple. "Orchid." 8c ea. 75c doz.

Scarlet. 8c ea. 75c doz.

Marginata. A species uniquely different. Very tall, slender, straight spikes with small flowers surrounding the stem for as much as upper 3'. Many lavender tones. Fine in flower arrangements. 10c ea. \$1.00 doz. \$7.50 per 100.

White. Its pure white flowers make it the favorite Watsonia of many. 6c ea. 60c doz.

Assorted Colors. Several colors included in a mixture. 6c ea. 60c doz. Per 100, \$3.75.

Freesias

Freesias are exquisite in beauty but their delicious fragrance is an appeal even stronger. Where they can be grown in the garden they are indispensable. They are easy forcers in pots and equally valuable for the window garden.

Culture. They are hardy only in the warmer sections of the south where temperatures do not go below about 26°. Plant outdoors early before Nov. if possible. They usually do well if planted in Nov. but the flower stems will be shorter, the flowers

smaller. Plant the half inch bulbs in a double row in one furrow 18 to the foot, or in a single row 12 to the foot. The large $\frac{3}{4}$ " bulbs should be farther apart. The larger bulbs will give you longer stems and more and better flowers. Plant 2" to 3" deep. Give full sun exposure.

In pots they should also be planted early tho the shorter stems resulting from Nov. planting are not so objectionable. Use the regular potting soil, sandy loam and leaf mould or well rotted dairy manure. Be sure to give them a sunny window and a cool room if flowers are wanted. Warm rooms, over 70°, will produce long spindling foliage but flowers may fail. The half inch bulbs will flower in pots but they are not so easy as the $\frac{3}{4}$ " size nor are the results quite equal. We advise large bulbs for pots. Set them 2" apart each way in a pot, about 6 in a 6" pot. Plant 1" deep.

The following list is chosen as the most satisfactory in the full range of colors.

Achievement. Orange

Golden Daffodil. Deep golden yellow. Easiest to force.

Orchidea. Orchid.

Pink Supreme. One of finest pinks.

Sunset. Flame red.

Prices, all varieties. $\frac{1}{2}$ " bulbs, 45c doz. \$2.50 per 100. $\frac{3}{4}$ " bulbs, 12c ea. \$1.00 per doz. \$6.00 per 100.

Assorted Colors. $\frac{1}{2}$ " bulbs 45c doz. \$2.25 per 100. $\frac{3}{4}$ " size, 90c doz. \$5.50 per 100.

Marie. The most outstanding new white Freesia. This is claimed to be equal in size to a Baby Gladiolus, with immense, wide open and delightfully fragrant flowers. In order that you may have the most satisfaction we have obtained the largest size bulbs $\frac{7}{8}$ " diam., reducing our profit in order to offer them at 25c ea. or \$2.50 per doz. Three for a 6" pot 65c.

Sparaxis

Sparaxis are closely related to Freesias, but are far more colorful. The colors range thru vivid tones of bright red, crimson, carmine, pink, apricot and sometimes an almost white one. A few reds are almost maroon. There is usually a contrasting color in throat. They are a little taller than Freesias and the flowers are larger, more flat and wide open. For pots, of winter flowers, few plants will create as much bright color as Sparaxis.

Culture like Freesias. They are hardier. Must have full sun exposure and in pots they need a cool room 60° - 70° day time, cooler at night. Plant 6 bulbs in a 5" pot.

Houdyshel Hybrid Sparaxis. We have grown and selected seedlings from the original Dutch varieties and now have a much more colorful strain. The colors mentioned above are descriptive of this strain and we can add that occasionally one finds colors approaching yellow, or blue. 10c ea. 6 bulbs for 35c. 60c per doz.

Sparaxis—Streptanthera hybrids. This is the same cross as the Bloem Erf hybrid Sparaxis. They are taller than Sparaxis and the colors run more into shades of orange. 6 bulbs for 25c. 45c doz.

Tritonias

Tritonias are also close to Freesias but taller. The red sorts are sometimes called Flame Freesias and these are good bulbs for pots. **Culture** like Freesias and Sparaxis.

Tritonia, Red and Orange mixture. 10c ea. 65c per doz.

Tritonia lineata. This interesting species grows 18" tall. The flowers are white, crossed by grey lines, hence "lineata." 3 for 15c. 50c doz.

Babianias

Blue flowers for the winter window garden are hard to find. **Babianias** are the answer. They are a vivid, intense blue to blue violet. **Culture** exactly like Freesias, Tritonias and Sparaxis in pots or garden except they should be planted about twice as many in a pot or given space.

Babiana plicata. A lovely small plant with "plicated" foliage. About 8" stems of

most vivid blue flowers. Easy in pots in a cool room. A dozen can be grown in a 6" or 7" pot. 6 for 35c. 60c doz.

B. rubro-cyanea. Intense vivid violet blue. Rarely the red which gives the violet tone to these flowers shows up more strongly and produces a red-purple flower. This species is taller and larger than *B. plicata*. Both are indispensable if you want "blue." 6 for 40c. 75c doz.

Marica gracilis. Walking Iris or Apostle Plant. The fugitive 2" flowers, white and blue with yellow and brown markings in center, are lovely. The flowers are followed by a small plant at end of scape. These become heavy and bend over to ground and take root, thus walking away from mother plant. **Culture:** give nearly full shade, plenty water, never drying out. Tender tropical but grown in pots in north. 50c ea.

Marica northiana. Very similar but much larger and more rare. \$1.00 ea.

Cipura paludosa. This is an Irid I have never seen. I am trying it experimentally and offer you the chance to do the same. It is rare and unusual in southern gardens. Tender but will stand temperatures as low as 17°. Altho it has been grown rarely in pots, I can offer no inducement as to probable success. Flowers white, borne in a terminal head. As this bulb needs good drainage, I suggest planting like Freesias, but in sandy or loose loam soil. Perhaps raised beds would help to improve drainage during heavy winter rains in Calif. 25c ea. 5 for \$1.00.

Moraeas. The *Moraea* tribe includes the genera *Moraea*, *Dietes* and *Homeria*. All should be planted in the fall. The bulbous *Moraeas* and *Homerias* may be planted like and given the same culture as *Freesias*. We can offer but one species of *Moraea* this fall and it is one of the best.

Moraea ramosissima. Grows 2 to 4 ft. tall. The tough, wiry and slender stems have a great many branches all covered by myriads of butterfly-like flowers. The color is amber yellow with lemon yellow oval at base of falls. 20c.

Homeria collina. An unusual plant, usually having only one long tapering leaf and the flower stem emerges from its inner surface. Flowers are 1" wide, fugitive, but freely produced, bright orange. It has little to recommend it except as an oddity among plants. The plant becomes a weed in mild climates unless chance seedlings are removed when they appear. In the north store bulbs and plant in spring. 10c.

Dietes. This genus only recently has been removed from *Moraea* and given a new generic name. *Dietes* differ from *Moraea* in having a rhizome, similar to the Bearded Iris, and sword-like leaves. Flowers are very much like those of *Moraea*, borne on long wiry stems thruout summer into winter. **Culture** like Iris. *Dietes* are evergreen and they cannot be dried off. Plant at once and keep them wet or they will not start. The flower stems are perennial and should not be cut off as they flower year after year.

Dietes catanulata. Low growing species with waxy white flowers on a tall stem. 50c ea.

D. iridioides. White with yellow and blue markings. 25c ea.

D. iridioides Johnsonii. Flowers are about twice the diameter of the type variety above. Plant more robust. True variety. 50c.

D. Oakhurst Hybrids. New hybrids that soon make large clumps that are very ornamental in the garden. Flowers freely in summer with a few most of the time in winter. 2" flowers on 4' stems. 75c.

HOW YOU CAN HELP US

to ship your orders more promptly. Like everyone else, we are short of labor. But we have plenty bulbs of nearly all items and we think enough labor to dig and ship them. We may not be quite as prompt as usual but we will get the bulbs to you within the correct planting season.

Help us by not requiring us to write letters if avoidable. Read first, "Terms and Instructions for Ordering," and comply. Order only bulbs as listed in this catalog, and only as specified in description. Use an itemized form for bulbs ordered. Be patient, if necessary, we do not merely want your dollars. We want to serve you well.

LILY FAMILY—Liliaceae

The type species is *Lilium*, or true Lily. Many call *Crinum*s, *Callas*, *Cannas* or any bulbs, "Lilies," but this is an error.

The Lily situation is most unsatisfactory because of the war. Many of our Lilies were grown in Japan, Bermuda, France, etc. American growers, because of lack of labor, have in many cases been unable to take care of their stock or to dig bulbs. We offer only the one true *Lilium* but several other genera of the Lily Family. We are omitting *Gloriosas* from our Fall Catalog but will list it in our Spring Catalog, before planting time. All the following belong to **Liliaceae** ending with *Veltheimia*.

Lilium regale. Large fragrant, white flowers, tinted pink with cream throat. This is one of the hardest and is easy to grow. It increases in size and number every year and becomes permanently established in the garden. It belongs in the perennial border along with Daylilies, Shasta Daisies, shrubs, etc. They prefer mildly acid soil and the addition of leaf mould and sand to your soil will give improved results. Mulch the ground or plant among shrubs or other plants that shades the soil surface but allows the plant to rise into the sunlight. Keep their feet cool and their heads warm. Large, over 2" diam. 30c ea. 3 for 80c.

Roman Hyacinths. We have been lucky enough to have a few of our own and to be able to buy a few. Most of America's stock has previously come from Holland and France. American sources have become depleted.

Culture. Plant in full sun or slight shade in sandy loam. They are difficult to grow in heavy soil unless lightened by very large additions of humus. Plant about 3" deep.

Roman Hyacinths. Assorted colors only. These are mostly blue and white. Price 25c ea. Better order early as we have only a few.

Muscari. **Grape Hyacinths**, var. **Heavenly Blue.** Racemes of closely placed, exquisite, tiny blue bells. Fine in pots or garden. L. 10c ea. 60c doz.

Scillas are closely related to Hyacinths. *Scilla hispanica* looks so much like Roman Hyacinths that they are often confused with them. All are useful in the garden or in pots and for cutting. All are hardy in the north except *S. peruviana*.

Scilla hispanica (campanulata). The **Spanish Jacinth.** The former name "campanulata" should be dropped although many catalogs continue to use it. We are almost out of stock of the common blue sort but have a giant blue variety that is much superior to any other named variety. All *Hispanicas* need half shade.

S. hispanica, Giant Blue. This is much the largest of the *Hispanicas*. Deep blue color, large flowers on 12" stems. These are fine for cutting and bulbs may be grown in pots like Roman Hyacinths, which they much resemble. They are as good as Roman Hyacinths and considerably larger. Large bulbs 30c ea.

S. hispanica alba. A large white. Largest bulbs, 10c ea. 90c per doz.

S. hispanica rosea. Pink flowers. 12c ea. \$1.20 per doz.

S. hyacinthoides. One of the finest bulbs for the outside garden and it is perfectly winter hardy in north. It has a densely flowered raceme often 3 ft. or more in height. Plant in full sun. If early planted, in the south it will flower in late winter to spring. In the north about mid-summer. Flowers are very useful for cutting. The bulb is extremely hardy and a strong grower and will even recover when left out of the ground a year. Take my advice, plant it. Top size, 25c. M., 15c. \$2.35 and \$1.50 per doz.

S. peruviana. Here is another blue flowering bulb for your winter window garden, one that is easy to grow, sure to flower and makes a large display. The flower scape is short as it should be for a pot but flowers are well above foliage. The raceme is very broad,—often 6" or more, compact and oval to conical in form. Give the bulb a pot about twice it's own diameter. Set it with neck of bulb above soil, full sun exposure and in a cool room. This is the only tender *Scilla* that we list, but it is very nice in southern gardens where it survives the winters well up the coast lines and is hardy at Washington, D. C. We have no small bulbs but jumbo size for 75c ea. and a few medium for 50c.

S. peruviana, white. These are less desirable than the blue but we have just a few large to jumbo bulbs for \$1.00 ea.

S. peruviana hybrids. These are improved varieties in a great many shades of white, rose, lavender to deep blue. The colors cannot be specified as they are not marked. Price \$1.25 ea.

Ornithogalum arabicum. The showiest ornithogalum. The round glossy black ovary in the center of the white flower is a beautiful contrast. Flowers in a compact raceme at top of stem giving the appearance of an umbel. Tender. Easy in pots, blooming about Easter. Jumbo bulbs 25c ea. L. 20c. M. 15c. S. 10c. Use only large bulbs for potting.

O. caudatum. A familiar pot plant in the north which is commonly but erroneously called "Sea Onion." The foliage and flowers are pretty but not outstanding. L. 50c. Jumbo, 75c.

Lachenalias, or Cape Cowslips, furnish bright colorful flowers from before Christmas to February and later. They are small plants, usually one or two leaves. Flower scape 6" to 12" tall, with 12 to 24 tubular flowers about 1" long. For early flowers start them early in September and in no case delay beyond late October to plant. Leaves and stems are sometimes gaily spotted and decorative. **Culture.** Easy outside in mild climates and force easily in pots in the house. Plant in full sun, 2" deep and 2" apart. Several can be planted in a pot at about 2½" apart. They may be grown outside or in flats and potted when in full bloom. When tops die, dig bulbs and store dry. They rot easily in the ground if moisture is received when dormant.

Lachenalia pendula superba. Brilliant coral red, tipped green and purple. A red flower for Christmas. Top size, 25c. \$2.75 doz.

Veltheimia viridifolia. Neither a picture nor words can accurately portray the beauty of this plant. For foliage alone it is superb. The vivid glossy green leaves are wavy margined and form a nice rosette. In pots, or in the garden in So. Calif. and other mild climates, it is in bloom by Dec. 15 and continues for about three months as large bulbs send up two or more spikes. The tubular, drooping flowers are densely placed on a long raceme. The color is a deep rosy or purplish pink of ineffable tones not found in any other flowers.

Culture is very easy. It prefers a sandy soil to which peat or leaf mould has been added. In pots the drainage should be perfect. They must be ordered early as nothing holds them back. Best to order before Sept. 15 or Oct. 1.

Specially priced. 50c ea. \$6.00 per doz. Extra large bulbs—75c, \$1.00 and \$1.50.

OXALIS FAMILY—Oxalidaceae

There are two types, the winter and the summer growing. The summer growing species are listed in our spring catalogs. The following are all winter growers. These are the brightest and most vivid of winter flowers for a sunny window or in the garden in the south. They give a profusion of bloom over several months period. A bed looks like a carpet of solid pink, rose, white, yellow, etc. The flowers are large, some over 1" diam.

Culture. Plant about 2" deep, 3" apart. Large bulbs may be farther apart and a little deeper. In pots, the smaller may go 6 in a 4" or 5" pot. Use good rich soil, altho they will grow in any soil. Give full sun exposure as they open only in full sun and close at night. Order and plant early as they begin to sprout even in August. But they may be shipped even with long sprouts up to mid-October.

Oxalis Bowiei. A large plant with bright rose red flowers. 3 bulbs to a 5" pot. 5c ea. 50c doz. \$3.75 per 100. Largest size 10c ea.

O. cernua. Bermuda Buttercup. Deep golden yellow flowers. Very profuse. 3 for 10c. 35c doz. \$2.50 per 100. Largest size, 10c ea.

O. Grand Duchess. Low growing plants, but give a profusion of very large flowers in three colors. The **Pink** and the **Lavender** varieties are 5c ea. 45c doz. \$3.00 per 100. **White** 7c ea. 60c doz. \$4.00 per 100. Jumbo sizes 10c ea.

O. hirta. One of the finest winter Oxalis, and most unusual as it makes a leafy stem that to some extent falls over and will trail down the sides of a pot. Nice for hanging baskets. The flowers are deep rosy red. Super jumbo bulbs, diam. 1" and up, the best blooming size for pots, 25c ea., \$2.00 per doz., \$12.00 per 100. L. 15c ea., \$1.25 per doz., \$9.00 per 100. M. 10c ea., 85c doz., \$5.00 per 100. S. 5c ea, 40c doz., \$3.00 per 100. Smaller sizes are likely to flower under ideal conditions only, but otherwise not too sure.

Oxalis Special. The bulbs offered in this lot are assorted in size but some are small. They will all flower well. Some are accidentally mixed, others are surplus. Price 30 for \$1.00.

THE ORCHID FAMILY—Orchidaceae

Orchids are the most exquisite of flowers, but most of them require a greenhouse. The *Bletilla* is a terrestrial orchid of great beauty and easy to grow in the outside garden. Hardy everywhere, north or south. **Culture** easy. Plant in half shade, 3" deep.

Bletilla hyacintha. Eight or more dainty orchids, 1" wide, on a 12" stem. True orchid color. Top size, 50c ea.

Epidendrum o'rianum. This orchid has a large terminal cluster of brilliant red flowers, each in the typical orchid form. The flowers open 10 or more at once and are about 1¼" wide. The plant makes a large cluster of tall stems, 3 ft. or more. In nature they grow among grasses or weeds which support them. We can imitate that by growing among erect plants.

They need hot, nearly full sun exposure; an abundance of water in summer. They grow easily in the garden in the south where minimum temperatures are not below 27°.

They like a deep mulch of leaves, small branches, etc. This helps to support the stems, protects the roots when too cold, (ours easily recovered from a low of 20°) and maintains the needed constant moisture of soil.

We use soil of rich sandy loam and for a distance of nearly one foot, we add 50% peat (in volume) to the soil.

They grow easily in pots or baskets. Use 50% or more peat or leaf mould.

Prices. Branch with roots attached 75c. Large clumps, up to \$10.00 in proportion to size.

Cymbidium Orchids are immensely popular in So. Calif. and wherever known. Their greatest fault is, they are hard to get at reasonably low prices. They are of easy culture, exquisite in beauty, of a wide range of colors and early varieties are in flower in Oct., the late ones in July.

I believe we have been particularly fortunate in getting a good selection. We have one lot of 500 plants in unlabelled varieties. These are some of the best and the labels were misplaced thru the carelessness of an employe of the grower. These are offered at only a little more than half price as some of them are varieties that would sell at \$10.00 ea. or more.

The large 4" to 6" flowers are borne on a stem often 4 ft. long, from 12 to 30 in number. Well established plants may give 4 or more stems and old clumps up to 35. The flower spikes remain in perfect condition for 8 to 12 weeks. When cut the flowers have unsurpassed lasting qualities and may be used many times in a corsage if kept in a refrigerator between times. Florists retail the flowers for almost as much as Cattleys.

The flowers are of typical orchid form and in a wide range of colors. It is impossible to give accurate color descriptions of these as altho the species are fairly constant in color the hybrids are quite variable. You must consider our descriptions only as approximate and sometimes not even that.

Culture. Cymbidiums are terrestrial orchids from India and Burma where they grow in the moist atmosphere of mountains and foothills in a perfectly drained situation. They are of easiest culture. The shade of the ordinary lath house, lath spaced 1" apart, 50% shade, is correct. The shade of trees, if it gives 50% filtered sunlight is excellent. They do best in a sandy soil to which at least an equal amount of peat or fine rotted

leaf mould has been added. In pots they may be grown in the same compost used for Begonias or they may be grown in orchid peat and leaf mould. If difficult to get just what you want, take equal parts of loamy sand and fine leaf mould. Oak leaf mould is best. Wherever planted, the underdrainage must be perfect. A soggy soil is very bad. They should always be moist, never too wet. Sprinkling the foliage is good in our too dry atmosphere. When well established give occasional light surface mulch of manure or manure water.

In the following list, the price attached is for a single division. They should flower in one or two years. We had have them flower 10 months after dividing and replanting but few will do that.

Cymbidium Butterfly. Yellow to buff with red lip. \$7.50.

C. Doreen. Greenish bronze, yellow lip spotted purple. \$7.50.

C. giganteum. A robust grower. The flowers are smaller than some but they are very pretty and as they are the earliest to flower they have no competition. \$7.50.

C. Insigne. White, flushed pink to deep rose pink. This is a very small plant and is not a rapid multiplier. The small size is an inducement to some for growing in pots. \$8.50.

C. Jessica. Very light to deep pink with up to 45 flowers in the spray. \$10.00.

C. Madeline. Very large flowers in a long spray. Flowers pink to yellow with purple spotted darker lip. A robust grower. \$10.00.

C. Moira. Shades of cream and yellow with crimson and purple markings on lip. \$8.50.

C. Veitchii. Creamy yellow flushed pink. Red spots on lip. Grows vigorously and increases rapidly. The spray is short with few but large flowers. \$5.00.

C. Winter Cheer. Cream or ivory white with pink dots and veinings. Red dots on lip. \$7.50.

C. Zebra. Very tall. Pink in various shades. \$10.00.

Special Offer. Assorted varieties, just as good as the above. Some may be even more rare. Price \$5.00 ea. If names are not too important to you, by all means, buy these unlabelled plants. The varieties are equally rare and the flowers equally good. They cost you less than present average prices.

Please note. Altho we ship Cymbidiums by parcel post (pre-paid) when or where there is no danger of freezing in transit, we will only accept orders from the north in the winter when frost damage is possible on the following understanding: We will ship by parcel post at your risk or we will ship by express at your expense, f. o. b. La Verne. We give express shipments heavier packing and the express company guarantees safe delivery.

THE CALLA LILY FAMILY—Araceae

This family contains the so-called Calla Lilies or Zantedeschia, Black Callas and other Aroids.

Culture. All Zantedeschias and Arum palaestinum are suitable for pot culture. A. palaestinum will start about September or later. Do not put this bulb into moist soil before that or it will rot. Zantedeschias—pink, yellow and spotted leaf—may be potted by about December 15. Don't rush them as too much water before they start to grow may rot them. They may be held back and started in early spring, here in late February. All do well in the garden in a moist semi-shaded cool place. They are not hardy in cold climates; dig in fall. The White Calla usually blooms in California in the garden in late winter. They may be planted in early fall in pots or garden. All do best in mildly acid soils, on sandy side.

It is an error to keep large White Callas growing continuously. If rested thru summer you will be rewarded with flowers. A rest brings flowers when they start again, often twice or more in a year. The Baby Calla should not be allowed to lose its foliage. Callas as pot plants need sun.

Zantedeschia aethiopica, var. Baby Calla. This is the smallest and whitest calla. Small enough for corsage. We send small bulbs as the large bulbs make larger flowers,

approaching in size those of Godfrey. For tiny 1" flowers replant your small bulbs. 20c ea., 3 for 50c. \$1.50 per doz.

Z. aethiopica, unknown European variety. This variety is about the size of the ordinary large white calla, possibly not quite so tall. The flowers are exceedingly white and more open, larger and distinctly different in form. The plant is more inclined to remain evergreen and to flower in summer and is more free blooming in all seasons. 75c.

Z. albo-maculata. **Spotted leaf-calla**. The prettiest foliage of all and worth growing for that alone. Endures sun best. Flowers, creamy white with dark throat. 25c.

Z. elliotiana. Pure golden yellow flowers. Requires more shade than others, but give potted bulbs part sun. 20c.

Z. rehmanni, var. **elegans**. This variety has light pink flowers of a lovely shade that many like better than the darker colored type var. It is taller, larger and a better grower. More easy also to force in pots. Large bulbs, 2" to 2½", 75c ea.

Arum palaestinum. **Black Calla** or **Solomon's Lily**. Foliage and flower like callas. Really black. Plant 4" deep and not before September 1. If not kept perfectly dry until that time the bulbs rot. Flowers in February in pots or in the garden in the south. No bad odor. Best in half shade. L. 75c and \$1.00.

A. italicum. Has attractive green leaves, veined in a light color. The flower spathe is long, inflated, ivory white. 75c and \$1.00 ea.

A. Maculatum. Like *A. italicum*, except plain green leaves and larger bulbs. Jumbo, \$1.00 to \$1.50.

Dracunculus vulgaris. Rich tropical foliage and huge black purple flowers. Carrion odor. Jumbo bulbs, \$1.00 to \$1.50.

BILLBERGIAS—Bromeliaceae

Billbergias have a rich, tropical appearance with the showiest inflorescence. In both foliage and flowers they are most unusual and most lovely. The foliage is stiff and erect, forming a cup. They are tender tropicals that are easily grown in pots but do well outside in So. Calif.

Being epiphytes they should be rooted in almost pure leaf mould, wood earth, (rotted wood), peat or sphagnum moss mixed with a little sand for greater substance. But they do quite well in half sand and half leaf mould or peat. Here they need half shade, but in the house, a sunny window is usually right. Sun brings out rich colors of foliage but don't over do the sun exposure as it may burn the leaves and prevent their functioning. The "cups" should hold a drink when growing. In the winter they rest and when you start them in winter do it "easy like." Not too much water until well rooted and growing but never allowed to dry out.

Billbergia nutans. The earliest to flower, often late Dec., usually in Jan.-Feb. The inflorescence is most beautiful. Price 50c. With bud showing, \$1.00.

B. distachia hybrid. Foliage reddish green with cream spots. Long spikes with rose pink bracts and blue margined green flowers. Blooms in early spring and a few in late summer. \$1.00.

B. rubro-cyanea. The foliage has very rich variable markings of green, red and white. Flowers green, edged dark blue with crimson bracts. \$1.50.

THE RANUNCULUS FAMILY—Ranunculaceae ANEMONES AND RANUNCULUS

These popular tuberous rooted plants are among our most desirable items for both pots and gardens. This year the supply is far short of the demand.

Ranunculus are in many shades of red, pink, yellow and white but no blue. If well grown and from a quality strain, the flowers are very double in innumerable shapes.

Anemones are red, pink, white and blue. The blue predominate in a mixture and are the most desirable. Our mixture is mostly the De Caen type, with single, poppy-like flowers, but there are a few St. Brigid type, double and semi-doubles.

Culture. They do best in sandy loam. They will succeed well in heavier soils made lighter by the addition of much humus. For this use any well rotted compost.

After planting, the soil must never dry out, and the bulbs will rot instead of sprouting if wet and soggy. They will also rot if the weather is too warm after planting or if potted bulbs are placed in a too warm room. 70% is about right.

Outside of the fact that these bulbs fall an easy prey to the penicillium rots they are not difficult in culture. These rots threaten the bulbs when first planted when the temperature should be cool and moisture not excessive. Later, if you allow plants to dry out, then give a thoro soaking, disaster may follow.

Plant 1" or 2" deep, 4" to 6" apart for smaller bulbs. Large bulbs around ¾" diam. stool out into a wide plant and should be 6" to 8" apart.

It makes little difference whether you plant small bulbs or large bulbs so far as cost of flowers is concerned. \$1.00 worth of bulbs gives about the same number of flowers. The larger bulbs bloom a few days earlier, they are a little more dependable as to sprouting and culture. There may be a slight saving with #3 (small) bulbs under ideal conditions. Do not soak the bulbs. It is good practice to sprout them in the cool shade of a tree if weather is a little warm. Fold bulbs in a damp burlap sack. Keep sack only slightly moist. Plant in full sun in garden or in pots but if it turns hot after planting shade the bed until well started. Protect young plants from birds. Birds like them.

The Ranunculus and Anemone situation is deplorable. They are grown mostly in San Diego Co. Here conditions are right for commercial culture. But some of the best locations have been taken over by the army. The very few growers who have been able to continue growing must now pay \$1.00 per hour for labor instead of 40c as formerly.

Weather conditions have also been most unfavorable. I have been unable to buy any 1944 crop bulbs.

Our bulbs are two years old. These two-year-old bulbs should be good but last year's reports were not as satisfactory as we like. A few customers reported nearly complete failure. A few reported 100% success with the #3 bulbs. All are of the same lot.

I believe it is probable that most of the failures were the result of very bad weather conditions for their growth or errors in culture.

The weather has been "unusual." It has been good weather for the development of penicillium rots, growth of yeast and bacteria. Even toad stools like it. A well-known doctor tells me there is more bacteria present than usual as shown by the easy souring or spoiling of milk and food. He says that more people have had rheumatism, arthritis or neuritis recently than he has ever known. Such conditions may have been bad also for Ranunculus and Anemones. Our own grower spent \$5,000 in planting a crop of seed and in weeding, until it developed that he had so few plants he could not dig enough bulbs to pay for cost of labor. So he plowed them under. Other growers have very small crops.

We did not get a chance to test our Ranunculus but we did test the Anemones and a fairly good percentage grew. But no guarantee goes with the bulbs. If you care to take a chance we will mix our #3 sizes with the few remaining larger sizes and sell them below cost to us at 50c per 100 or \$4.00 per 1,000. You may have all Ranunculus, all Anemones or a mixture of the two. If I did not think some of them would grow they would not be offered. We never guarantee these bulbs and this year we frankly admit they are doubtful. In fact we advise you to buy elsewhere if you can get 1944 crop.

GOATS

Goats are helping, like Victory Gardens, to win the war by supplying milk, cream, butter and meat. We have 5 goats and 3 of them now supply us all we can use, also our 75 chickens, my wife's 20 cats and give some to our friends. We are not in the goat business but will sell 2 or 3 to some one nearby. We will not crate and ship. Two are Nubians, one Alpine-Saanen. Price \$15 to \$30. Write for description if you want to buy a good goat. We will exchange for 8 ft. Frigidaire or General Electric or buy for cash.